

# MATERIAL RECYCLING

MUMBAI | AUGUST- SEPTEMBER 2020

PAGES 68 | PRICE ₹ 200/- | VOLUME 2 | ISSUE 2

THE VOICE OF INDIAN RECYCLING INDUSTRY

## ALANG SHIPBREAKING INDUSTRY

# WAITING FOR NEXT TIDE



FOCUS: Nepra

*Innovating in the age of SDGs*

OUTLOOK: Circular Economy 2.0

*Where nothing is wasted*

UPDATE: MSMEs and Bankking

*Fifty-fifty*

ENTREPRENUERSHIP: Waste

*Tile the pile*



ANALYSIS: Steel Scrap Market

*The rollercoaster ride*

LEE ALLEN



RESEARCH: Aluminium Recycling

*Trends & challenges*

DR. C. BHAGYANATHAN



INNOVATION: Plastic waste

*Finding real time solutions*

DR LISA SREEJITH

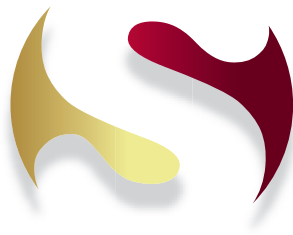
**Largest Metal Scrap  
suppliers in India  
catering to Foundries  
& Steel Plants.  
Manufacturers of  
Steel Billets, TMT Bars  
& MS Structural Steel.  
Dealers of  
all kinds of  
Ferro Alloys.**

- All kinds of Ferrous Scrap, Non-Ferrous Scrap, Ferro Alloys, Base Metals, Minor & Major Metals
- Manufacturing of TMT Bars, MS Structural Steel & Copper Tubes.
- Turnkey Demolition Projects.
- Presence all over India with scrap yards & offices.
- Global Presence in USA, UK, UAE, SINGAPORE & AFRICA for domestic & international trading.
- Automobile Dealership of Toyota - 3S facility with 4 state-of-the-art showrooms in Mumbai.

**4** Years Ahead

Corporate Office: 401-404, Navkar Complex, Opp. Andheri Court,  
Court Lane, Andheri (East), Mumbai 400 069, INDIA.  
+91-22-67872900 | [info@mtcgroup.in](mailto:info@mtcgroup.in) | [www.mtcgroup.in](http://www.mtcgroup.in)





# sunberg limited

## Gratitude and **Thank You** to all our Clients and Team Members!!



### YEARS — ANNIVERSARY CELEBRATION

#### PASSIONATELY SERVING & SUPPORTING METAL RECYCLING



#### GLOBAL TRADE



#### FINANCE



#### LOGISTICS



#### RELIABILITY

Aluminium Extrusion • Talk • Tally • Tense • Taint Tabor • Wheels • Aluminium Ingots DIN226 • EN46000 • ADC12 • 98% Al • Brass Honey • Brass Ingots • Copper Birch Cliff • Cobra • Clove • Slabs/Ingots • Wire Rods • Electric Motors • Meters • Alternators • Shredded Steel • Zorba • Zurik • Zinc Die Cast Scrap

## COME COLLABORATE



**E-mail:** [service@sunberglimited.com](mailto:service@sunberglimited.com)  
**Web:** [www.sunberglimited.com](http://www.sunberglimited.com)



**AYYAPPAN V.**  
SR EDITOR

## editor speak

**WITH THE BURNING ISSUES OF PLASTIC AND OTHER WASTES, THERE ARE NUMEROUS DEVELOPMENTS HAPPENING IN INDIA, AS IT IS ELSEWHERE ACROSS THE GLOBE.**

**C**ovid-19 continues to play havoc across industries all over the world. While in our last edition of the magazine, the cover story tried to traverse the ground and gave you a sense of how it impacted Indian Recycling, this time it takes you to Alang, to understand how the world's largest ship recycling facility has faced the lockdown following the pandemic and the life after.

In addition, it also takes into account industry reaction to Government's reported idea to enhance the scope of Alang facility to include an automobile recycling hub.

Recycling market forces across the world are realigning the dynamics in response to developments since Covid-19 struck the world economy. Fastmarket's senior reporter and analyst, Lee Allen takes a closer look at the South Asian Scrap markets and comes up with some interesting observations about the rollercoaster ride in his article.

It seems to be the time of start-ups and innovations, even in the recycling sector. With the burning issues of plastic and other wastes, there are numerous developments happening in India, as it is elsewhere across the globe. This edition presents you two such samples. While two youths from Mumbai – Sharad Ambadkar and Varad Tole – have successfully closed the loop in the waste management, Dr Lisa Sreejith from Kerala has many patents to her credit for solutions to environmental menace caused by plastic waste.

Dr. C. Bhagyanathan from Coimbatore writes about his experiments with recycling of aluminium for industrial use and shares his findings.

Dr Sameer Joshi, as usual, gives us a glimpse into the future of Industry 2.0, while BK Soni of Eco Recycling shares a lesson or two that he learned from the Covid Pandemic and comes up with an innovative suggestion to restore the balance we have disturbed in our environment.

There are some equally insightful articles on secondary metal recycling, recycled content and e-waste management which are worth your reading time.

*Be safe and take care.*





#1  
CERTIFIED  
TMT BARS

#say **YES**  
to **ARS**

#### Grade Level Elongation Presentation

ARS	BIS	GRADE
16% - 20%	14.5%	550D
-	10%	550
-	16%	500S
-	16%	500D
-	12%	500
-	18%	415S
-	18%	415D
-	14.5%	415



**ARS STEELS & ALLOY INTERNATIONAL PVT. LTD.**  
**Chennai, India**

crm@arssteels.co.in | www.arsgroup.in | Customer Help Line: 97104 11111

## COVER STORY

24

ALANG SHIP RECYCLING INDUSTRY

WAITING FOR THE NEXT TIDE



Touted to be one of the largest of ship recycling facilities in the world, the industry based out of Gujarat has its own tales of misery and misfortune to tell in the wake of Covid-19 pandemic. While looking at the emerging scenario, our cover story also tries to piece together another narrative borne out of recent reports about the government planning to incorporate auto recycling hub in Alang

## EDUCATION

8

E-WASTE

JOINING HANDS

In an industry-academia collaborative effort, two Hyderabad-based Institutes have started a post-graduate course in E-waste management.

## ANALYSIS

16

S. ASIAN STEEL SCRAP MARKETS

THE  
ROLLERCOASTER  
RIDE



Steel scrap markets in South Asia have been displaying some unusual trends in the wake of Covid-19. Lee Allen of Fastmarkets, who have been tracing these movements very closely, tries to decipher the peculiar behaviour for us

## OPINION

12

ENVIRONMENT

FOR NATURAL RECYCLING

BK Soni of Eco Recycling is a man of ideas. Here he recommends an innovative way to restore the equilibrium that we have disturbed in Nature due to our very own thoughtless actions

## INNOVATION

14

PLASTIC WASTE

FINDING REAL TIME  
SOLUTIONS

This professor at NIT Calicut, Kerala, has brought about few pathbreaking innovations to address the increasing environmental menace caused by plastic waste. A look at her work



## UPDATE

10

MSMES & BANKING

FIFTY-FIFTY

The raging pandemic has the industries going through harrowing times and all the eyes are on the fiscal support extended by the government. Here is more on the numbers surrounding the give and take story between banks and the industry

## ENTREPRENEURSHIP

20

WASTE

TILE THE PILE

Necessity is the Mother of Innovations, it is the mantra of two youngsters from Mumbai who have been successfully able to close the loop in waste by creating sustainable and truly circular solution.



## FOCUS

46

NEPRA

INNOVATING IN THE AGE OF  
SDGS

Ahmedabad-based Nepra has translated its philosophy to serve society for its waste management needs and for a clean, green, healthy tomorrow. A report on its activities

## RESEARCH

36

ALUMINIUM RECYCLING

TRENDS AND  
CHALLENGES

Dr. C. Bhagyanathan has lot to share about his research projects that he has executed in the recent past for the benefit of metal industries in the South. Here he writes about recycling of aluminium scrap for industrial applications







## OUTLOOK

### CIRCULAR ECONOMY 2.0

## WHERE NOTHING IS WASTED!

The world of plastics is changing too fast to our understanding. Dr Samir Joshi takes us around and introduces what is there in the new old normal and tells us what to expect next



## NEWS

### ECO RECYCLING

## SPREADING THE WINGS

The Mumbai-based e-waste recycling company unveils plans to increase its footprint in India and abroad with multiple programmes. The listed company enumerates them all at its latest AGM

## EXCERPTS

### COPPER RECYCLING

## FOR A LEVEL PLAYING FIELD

Secondary metal recycling industry has to fight its way out through multitude of challenges. MRAI President Sanjay Mehta enumerates them, while appealing to the primary producers of the friendly metal for cooperation and peaceful co-existence, at an international conference, recently.



## STRATEGY

### RECYCLED PLASTIC CONTENT

## SPURRING DEMAND

In a welcome development, ISRI makes its stand clear by taking a new position on minimum recycled plastic content which will lead industries to increase its use of recycled plastic in manufacturing of new goods

## STUDY

### E-WASTE

## COMPREHENSIVE IN DETAIL

Bureau of International Recycling reveals interesting aspects about global e-waste in a latest report that should help stakeholders to understand the emerging scenario better and help them management it more effectively and efficiently



## BRIEFS

### SECTORS

Salient features of different segments from material recycling universe for your benefit

40

44

50

34

54

60

SR. EDITOR

**Ayyappan V**

DESIGN & EXECUTION

**Jyoti C. Narkar**

ADVERTISING

**Ajay Kanoujiya**

SUBSCRIPTION

**Sadhana Gupta**

ACCOUNTS

**Anil Borhade**

PUBLISHER & PRINTER

**Amar Singh**

PRINTED AT:

Bharat Copy Centre Private Ltd,  
18/20 Gothis House, Police Court Lane,  
Near Handloom House, Fort,  
Mumbai, 400 001.

ADMINISTRATION & EDITORIAL OFFICE:

**Material Recycling Association of India**

211-212 Midas, Second Floor, Sahar Plaza,  
JB Nagar, Chakala, Andheri (East),  
Mumbai 400069.

Phone: +9122 4970 1290

E-mail: [editor@mrai.org.in](mailto:editor@mrai.org.in)

Website: [www.mrai.org.in](http://www.mrai.org.in)

SUBSCRIPTION RATES (One year):

INLAND Rs 1200

FOREIGN (Air Mail) US\$ 75

All Rights Reserved. Reproduction Without Prior Permission of the Publisher is Expressly Prohibited. The Publisher Makes Every Effort to Ensure that the Magazine's Contents are Correct. However, We Accept no Responsibility for Any Errors or Omissions and Accept no Responsibility for any Loss or Damage Caused as an Effect Thereof.

The opinions expressed are that of the authors and in no way reflect that of MRAI, Publisher and Printer.



## ★ EDUCATION ★

### E-WASTE

# JOINING HANDS

IN AN INDUSTRY-ACADEMIA COLLABORATIVE EFFORT, TWO HYDERABAD-BASED INSTITUTES HAVE TAKEN THE FIRST STEP TO OFFER EFFECTIVE SOLUTION TO E-WASTE MANAGEMENT IN THE COUNTRY

Indian Institute of Technology-Hyderabad (IITH) and Centre for Materials for Electronics Technology (CMET) have together taken the first step to find effective ways to recycle e-waste with the launch of M-Tech (E-waste Resource Engineering and Management).

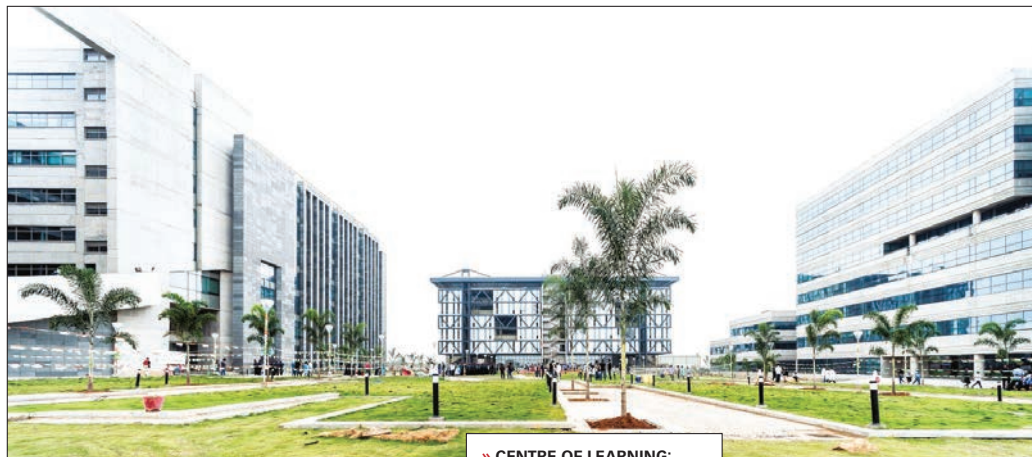
The programme is expected to catalyse the efforts towards E-waste management in the country and worldwide and will provide the necessary support for several Government initiatives

According to Dr Chandra Shekhar Sharma, Associate Professor, Department of Chemical Engineering, IITH and Course Coordinator, the unique course has attracted students from different wings of engineering such as Civil, Electrical and Mechanical.

"With the rapid change in technology and more digitalisation in the world, there is an explosive growth in the electronics industry and subsequently, that has led to enormous growth in electronic waste (e-waste). E-waste contains many hazardous and toxic substances which have serious health and environmental effects, if not managed properly. Therefore, it becomes essential to learn about various technological interventions to manage, reduce and recycle e-waste for its safe disposal" he said.

As per the agreement between the two premier institutes, the students will get practical learning at C-MET which will be equally complemented by theoretical knowledge by IITH's Academician. This will not be merely a course but will also provide an opportunity for the students to work on various industry-oriented problems and MeitY will play the role of catalyst.

Both of our facilities are working towards developing effective and economic technology for e-waste recycling and management.



» CENTRE OF LEARNING:  
Indian Institute of Technology-  
Hyderabad

The programme will catalyse the efforts towards E-waste management in the country and worldwide and will provide the necessary support for several Government initiatives in this direction such as Skill India, Swachh Bharat, Waste-to-Wealth initiatives.

Arvind Kumar, Group coordinator, MeitY said "India is the largest e-waste generator in Asia and among top five countries in the world. There is a great dearth of skilled manpower in this sector to develop and advance technology. This Course by IITH & CMET will help the industry in realising and localising the technology and MeitY endorses this Center of Excellence to develop resources, support the economy and save the environment."

Besides, this course, IITH have launched eight new M.Tech programmes. This include classes for M.Tech courses in Additive Manufacturing, Energy Science and Technology, E-Waste Resource and Engineering Management, Integrated Sensor System, Network and Information Security, Polymers and Biosystems Engineering, and Smart Mobility.

➡  
*The course will help the industry in realising and localising the technology.*





**A.R. INTERNATIONAL**

## REMEMBER US FOR SOURCING QUALITY SCRAP

### SCRAP WE DEAL IN

#### **FERROUS**

- SHREDDED STEEL SCRAP 211 ● HEAVY MELTING STEEL SCRAP ● PLATE AND STRUCTURE CAST IRON SCRAP ● ROTORS AND DRUMS ● MANGANESE STEEL SCRAP

#### **NON - FERROUS ALUMINIUM**

- ZORBA ● ALUMINIUM EXTRUSIONS ● ALUMINIUM WHEELS ● TAIN TAPOR & TENSE ● CAST ALUMINIUM SCRAP ● LITHO SHEETS ● ALUMINIUM COPPER RADIATORS ● ACSR / URD CABLES ● ALUMINIUM PAINTED SIDINGS ● TOUGH TABOO ● ALUMINIUM TURNINGS / PUCKS

#### **NON - FERROUS cont'd LEAD**

- SOFT MIX LEAD ● WHEEL WEIGHTS ● LEAD COPPER CABLE ● LEAD STRIPPINGS ● RANGE LEAD ● LEAD SHOTS

#### **ZINC**

- OLD ZINC DIE CAST ● NEW ZINC DIE CAST ● ZINC SHEETS ● ZINC ANNODS ● ZINC SKIMMINGS / DROSS

#### **COPPER**

- COPPER # 1 ● COPPER # 2 ● YELLOW BRASS ● RED BRASS ● BRASS RADIATORS ● HARNESS WIRES ● INSULATED COPPER WIRES

#### **LOW GRADE COPPER**

- ALTERNATORS ● STARTERS ● AC COMPRESSORS ● TRANSFORMERS ● SEALED UNITS ● COPPER BALLAST ● ELECTRIC MOTORS

#### **SS & ALLOYS**

- ZURIC ● SS 304 ● SS 316 ● 17/4 & 15/5 PH ● REUSABLE SS ● SS TURNINGS ● 409 CATALYTIC SHELLS ● SHREDDED 409 CATALYTIC SHELLS ● SS 430 ● SS 410 ● SS 446

#### CONTACT DETAILS

- ☎ +91 78690 92800
- 📍 302, Gangotri Apartment, Plot No. 340, Sector - 1, Shrivane Nerul, Navi Mumbai – 400 706, India
- 🌐 Website: [www.ar-international.in](http://www.ar-international.in)
- ✉ Mail: [info@ar-international.in](mailto:info@ar-international.in)



Member of MRAI

★ UPDATE ★

## MSMES AND BANKING

# FIFTY-FIFTY

THE RAGING PANDEMIC HAS THE INDUSTRIES GOING THROUGH HARROWING TIMES AND ALL THE EYES ARE ON THE FISCAL SUPPORT EXTENDED BY THE GOVERNMENT. HERE IS REPORT ON THE STATUS OF BANKING FINANCE TO MSMEs

**A**s on September 03, 2020, public sector banks (PSBs) and private sector banks (PVBs) have sanctioned Rs. 1,61,018 crores (in 41.94 lakh accounts) and disbursed Rs. 1,13,713 crores (in 24.70 lakh accounts) to MSMEs under Emergency Credit Line Guarantee Scheme (ECLGS). the cumulative sanctions is -54.0% of the total target of Rs. 3,00,000 crores.

The average sanction and average disbursement per account is Rs. 3.84 lakh and Rs. 4.60 lakh, respectively. The share of PSBs sanctions and disbursements in total sanctions and disbursements stood at 48.0% and 55.0%, while PVBs share stood at 52.0% and 45.0% respectively.

India's largest lender State Bank of India followed by Punjab National Bank, Canara Bank, Bank of Baroda and Union Bank of India are the five leading credit lending public institutions to Covid-hit MSMEs under the Rs 3 lakh crore ECLGS scheme, according to the government data.

As on September 3, 2020, 12 public sector banks have cumulatively disbursed Rs 62,025.79 crore into 21,28,010 MSME accounts, as per the data tweeted by the Finance Minister Nirmala Sitharaman's office on Monday.

The overall credit disbursement including 24 private banks and 31 non-banking financial companies (NBFC) was Rs 1,13,713.15 crore into



## SMALL BUSINESSES WORST AFFECTED BY COVID: SURVEY

**SMALL BUSINESSES IN INDIA** witnessed a sharp contraction in net sales growth during Q1 FY21 from the year-ago period due to the Covid pandemic and the following lockdown that was enforced by the Modi government on March 25. According to the Q1 performance analysis of 747 small businesses by Care Ratings, their net sales saw negative growth of minus 66.7 per cent from Q1 FY20. "It can be seen that at the aggregate level companies having net sales less than Rs 25 crores recorded a sharp contraction in net sales growth during the quarter," the study noted.

The assessment of small businesses was part of a performance sample of 1,666 companies sourced from Ace Equity, which had released results till September 1, and registered minus 25.3 per cent growth in net sales during the quarter vis-a-vis 5.7 per cent growth for the same period FY20.

The contraction for entities with net sales of Rs 25-50 crore stood at minus 56.3 per cent while for businesses with Rs 50-100 crore in net sales, it was minus 57.8 per cent. Similarly, for companies with net sales of Rs 100-250 crore, Rs 250-500 crore and over Rs 500 crore, the negative growth reported was 43.3 per cent, 40.2 per cent and 22.4 per cent during Q1 FY21 in comparison to Q1 FY20.

Following the lockdown, majority small businesses had narrowed their operations to negligible or no growth at all while others had to temporarily shut operations even as demand plunged on one hand and on the other workers had returned to their hometowns amid lack of work.



**PSBs and PVBs may need to sanction Rs ~55,000 crores and Rs ~14,000 crore per month for the next two months to maintain their share in overall bank credit.**



In August, the Reserve Bank of India permitted banks a one-time dispensation for recasting loans impacted due to the pandemic.

Among the top three states benefiting from the MSME credit guarantee scheme were Maharashtra, Uttar Pradesh and Tamil Nadu. While lenders disbursed Rs 6,708 crores into 1,83,839 MSME accounts in Maharashtra, Rs 6,200 crore and Rs 6,150 crore were disbursed into 2,38,968 and 2,31,943 MSME accounts in Uttar Pradesh and Tamil Nadu, respectively.

Other states which received significant levels of sanctions and disbursements include Uttar Pradesh, Gujarat and Karnataka.

**Figure 2: Sanctions and Disbursements by PSBs**

Banks	Amount in Rs Crore (As on September 03, 2020)	
	Cumulative Sanctioned	Cumulative Disbursement
State Bank of India	24,389	18,972
Punjab National Bank	10,511	8,265
Canara Bank	8,413	7,084
Bank of Baroda	8,248	6,597
Union Bank of India	6,395	5,266
Bank of India	5,170	4,359
Indian Bank	5,043	3,951
Indian Overseas Bank	3,522	1,856
Central Bank of India	2,634	2,373
Bank of Maharashtra	1,745	1,560
UCO Bank	1,104	903
Punjab & Sind Bank	892	840

Source: Public Sector Banks, Note: All banks loan book is as of June 2020.

24,70,312 MSME accounts. The share of private banks and NBFCs was Rs 51,687.36 crore disbursed into 3,42,302 MSMEs.

"Compared to 24 Aug 2020, there is an increase of Rs 5,022.06 crore in the cumulative amount of loans sanctioned and an increase of Rs 7,786.16 crore in the cumulative amount of loans disbursed by both PSBs and private sector banks combined as on 03 Sept 2020," Finance Minister Nirmala Sitharaman's office tweeted.

In a meeting of heads of banks and NBFCs to review the progress of schemes including partial credit guarantee and sub-ordinate debt apart from ECLGS, the Finance Minister had asked banks to launch the debt resolution or recasting schemes by September 15 for Covid-related stress among businesses.

She had also stressed that the Covid related distress should not affect the lenders' assessment of their creditworthiness as and when the moratorium on loan repayments is lifted.

## SANCTIONS AND DISBURSEMENTS

CARE Ratings, the average disbursement per borrower by PVBs was Rs 15.10 lakh as compared to Rs 2.91 lakh by PSBs. The PSBs have around 58.0% and PVBs have around 34.0% market share in total bank credit as on June 30, 2020.

As per the scheme, banks can lend Rs 3 lakh crores till October 31, 2020 out of which ~26.0% is already sanctioned by PSBs till September 03, 2020.

PSBs and PVBs may need to sanction Rs ~55,000 crores and Rs ~14,000 crore per month for the next two months to maintain their share in overall bank credit.

*As per the scheme, banks can lend Rs 3 lakh crores till October 31, 2020 out of which ~26.0% is already sanctioned by PSBs till September 03, 2020.*

## ★ OPINION ★

### ENVIRONMENT

# FOR NATURAL RECYCLING

A LOCKDOWN EVERY LEAP YEAR IS WHAT BK SONI OF ECO RECYCLING RECOMMENDS TO RESTORE THE BALANCE WE CAUSE TO NATURE DUE TO OUR THOUGHTLESS ACTIONS

**W**hat a wonderful change in the air quality across globe! It's a time to breathe without mask but because of Corona, we can't dare to do so. Same is the case with water bodies, it is so fresh and potable, it's time to drink the water without applying any filter. It is equally true that these positive changes have been achieved at the cost of complete lockdown to avoid spread of Corona Virus.



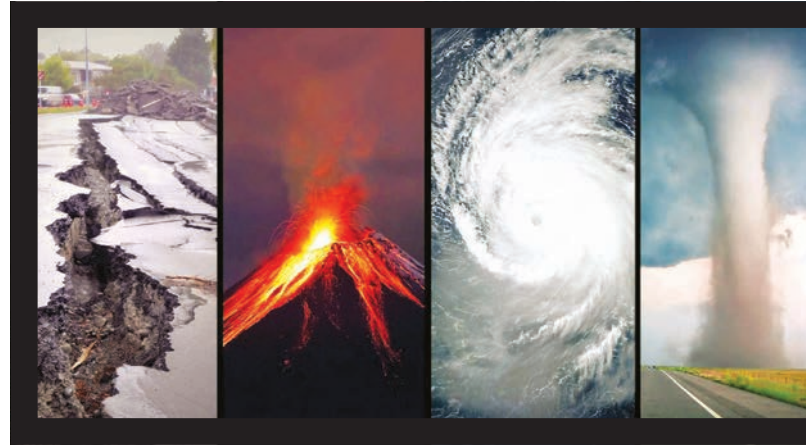
**B K SONI**

Unfortunately, whenever we fail to perform our part of responsibility to upkeep The Nature's Properties (natural resources) as per its standard in such cases the Nature never hesitates to apply one or the other Recycling Systems like Earthquake, Tsunami, Glacier Melting, etc. to protect its properties but the cost and damages of the same is always very high. Probably, the corona virus is another creation of the Nature, till proven otherwise. To these natural recycling systems, we call "Natural Calamities", probably because, we are unable to control Nature's ex-

treme action which is a result of our misbehaviour with the Nature. We must remember that the Nature will never fail to apply one or the other Recycling Systems as and when, we fail to protect its Properties. The time has come for us to start distinguishing between our need and greed before using natural resources. It is often mentioned by the experts that we must protect the natural resources and the environment for our future generations! I would like to ask, whether do we not need the above, and if we do, can we further defer our responsibilities towards environment and ecology.

I am of the view that, UN should consider complete lockdown throughout the world for one month

(preferably February itself) every leap year to give time to the Nature to neutralise the damages caused in the past four years. As we better know, prevention is better than cure, maintenance is bet-



ter than breakdown and now conservation of natural resources is a better option rather than giving Nature a chance to apply its Recycling Systems to streamline its resources without imposing an unbearable cost on us.

The above action will surely help the nature to heal / to restore / to revitalize / to recapture its glory and will help each and every one live a healthier life. This will also help build better physical and mental health which will directly reduce the burden on hospitals and other medical facilities and will improve productivity of every nation which will result into greater GDP of every nation.

The lockdown will have great positive impacts, like clean air that we can breathe because of absence of air pollution from vehicular transport and the industrial sector which contributes the most. Never in so many decades we have seen the holy rivers like Ganga, Yamuna, Narmada etc. so clear due to the closure of all kinds of pollutants going into these rivers. Never did we see the skies so clear, thus improving the extent of visibility.

According to the suggestion for a lockdown every leap year, the next leap year will be in February 2024 which will give sufficient time to public and administration to plan everything in advance with the application of the learning and experiences acquired during this ongoing lockdown of Covid 19.

➔ *Never in so many decades we have seen the holy rivers like Ganga, Yamuna, Narmada etc. so clear due to the closure of all kinds of pollutants going into these rivers.*

» **Mr Soni** is Chairman and Managing Director of Eco Recycling Ltd, Mumbai



# Thinking Metals?...Think **METCO!**



## **METCO**

*men with mettle*

INTERNATIONALLY SOURCING, AND SELLING :

- *ALUMINIUM SECONDARY INGOTS, AND SCRAPS*
- *ALL GRADES OF STAINLESS STEEL SCRAPS*
- *COPPER, BRASS & BRONZE SCRAPS*
- *ZINC & LEAD SCRAPS*
- *FERRO ALLOYS*

CALL +91 22 6216 8484

EMAIL : [metco@metcoindia.com](mailto:metco@metcoindia.com)

### **METCO MARKETING (INDIA) PVT. LTD.**

*[www.metcoindia.com](http://www.metcoindia.com)*

★ INNOVATION ★

## PLASTIC WASTE

# FINDING REAL TIME SOLUTIONS

FOR **DR. LISA SREEJITH** OF NIT CALICUT, KERALA, FINDING SOLUTIONS TO EVERYDAY PROBLEMS IS A WAY OF LIFE. HOLDER OF TWO PATENTS, SHE HAS BROUGHT ABOUT PATH-BREAKING INNOVATIONS TO SOLVE THE INCREASING ENVIRONMENTAL MENACE



**DR. LISA SREEJITH**

**P**lastic, the most versatile and wonder material, is the product of spectacular developments in the area of polymer science and technology. It is now considered as one among the trinity of material systems: metals, ceramics and polymers. Although not as strong as metals and cannot survive extreme temperatures, plastics outclass all other materials in their low density, strength to weight ratio, low corrosion rate, excellent barrier and surface properties. The ease with which they can be processed into a variety



**What makes Dr. Lisa's technology different from similar ones in other parts of the nation and in foreign countries is that she had used all kinds of plastics for producing petroleum products.**

of products of intricate shapes and sizes and their exceptionally low cost makes them highly competitive and gives them an enviable position in comparison to metals and ceramics.

Plastics have become accepted in our every day life as a result of its wide use. The total consumption of plastics in India is around 3 million tonnes and the waste produced is about one million tonnes. The very factors that popularize plastics in our modern life are in fact a threat also to our very survival. The extreme durability of plastic defies the natural recycling process of the biosphere. Chemically, it is the most non-biodegradable material man has ever produced. Thus it poses severe threats not to mankind alone but to the other living beings on earth. Seeds germinate but cannot survive as it cannot push its roots through the polymer chain of a carry bag lying littered on earth. When get accumulated in large bulk, for want of a better option, people are forced to set it fire which releases enormous amounts of toxic gases to the atmosphere. Dioxans and furans – the major toxic gases evolved are known to be carcinogens. Apart from cancer, this also could lead to diseases related to malfunctioning of kidney, lungs and reproductive organs. This increased rate and the related sufferings have made Dr Lisa to think of a real time solution to the plastic menace.

It was in 2012, when she was working as the Green Mission coordinator at NITC, Dr Lisa first started working on a project for cost-effective conversion of plastic into energy. In 2013, after several rounds of experiments, she managed to produce cooking gas, equivalent to bio-gas generated in households, from plastic waste materials. However, she found the by-product generated in the process quite interesting, and out of curiosity, the professor continued to work on a more useful and by-product-free conversion of plastic. These efforts led her into an entirely new plane. During the lab tests conducted in subsequent years, through modified pyrolysis, 4gms to 1 Kg of grade 1 to grade 7 plastics, including charring plastic, were converted to fuel. Using the technology she also developed, one kilogram of plastic when processed and generated 860 ml of plastic oil and on further processing produced around 650 ml of diesel and other fuels of interest. The residue, which was equivalent to ash, were found to be good for various applications. The developed technology was also proved to be cost-effective and eco-friendly. At present test are con-



tinuing for generating power using the crude oil obtained by the technology.

What makes Dr. Lisa's technology different from similar ones in other parts of the nation and in foreign countries is that she had used all kinds of plastics for producing petroleum products. While most researches resort to selective destruction, the one developed at NITC has used assorted plastics, including charring plastic. Dr Lisa was granted patent rights over the technology in 2019.

To expand the project from lab-level to industrial level, tenders are in progress and would be implemented under the Swachhata Mission of the Ministry of Human Resources Development. A sum of Rs. 75 lakh is sanctioned for setting up a pilot plant of 100 kg capacity in NITC campus.

She was got another patent in 2019 for development of artificial cartilage from crab and shrimp shells, which otherwise lie scattered along coastal areas.

Dr Lisa is busy with developing a water filter using treated human hair, which is considered as a waste material.

Earlier she has successfully deinked paper and the process was found very effective for reusing for maximum of 20 times. The effluent was treated and the treated solution was used for the preparation of fresh ink.

» Professor of Chemistry, NIT Calicut, Kerala, **Dr. Lisa Sreejith** has two Indian patents and has over 45 International publications to her credit



*In 2013, after several rounds of experiments, she managed to produce cooking gas, equivalent to bio-gas generated in households, from plastic waste materials.*







★ ANALYSIS ★

## S. ASIAN STEEL SCRAP MARKETS

# THE ROLLERCOASTER RIDE

FOLLOWING COVID-19 PANDEMIC THE STEEL SCRAP MARKETS IN SOUTH ASIA HAVE BEEN DISPLAYING SOME UNUSUAL TRENDS. **LEE ALLEN** OF FASTMARKETS, WHO HAVE BEEN TRACING THE MOVEMENTS VERY CLOSELY, WRITES ABOUT THE PECULIAR BEHAVIOR



LEE ALLEN





*With the Covid-19 crisis mounting in Bangladesh and India, road traffic from West Bengal to Bangladesh became increasingly slow with large pile-ups of trucks at the border, thus forcing Bangladeshi buyers to seek alternative arrangements to receive their DRI*

— LEE ALLEN

**T**he Covid-19 crisis has been a major disrupting factor in South Asian steel scrap markets this year. There has been the balancing act of supply-side tightness due to reduced scrap on one hand and of lower scrap buying at many induction furnace mills in South Asia on the other. But in addition to these 'bread and butter' trends, Fastmarkets has also reported some unusual happenings which have now become more common due to the pandemic.

## BULK BUYING

In late February, a mill in Pakistan bought a cargo of shredded scrap in bulk from the US West Coast. The deal was the first of its kind since 2017, but since the transaction, Pakistan has purchased several more cargoes. One reason for the move has been an increase in steelmaking capacity within the country, but Covid-19's impact on trade has also played a crucial part in this development.

Low scrap supply in the US and UK has been another reason for the bulk buying, with buyers happier to secure large tonnages at once rather than being at the mercy of rising container scrap markets - which is Pakistan's usual method of scrap importing. A further reason for the trend, sources said, has centered around freight issues. Container freight costs rose sharply in February due to a shortage of containers linked to the slowdown at Chinese ports caused by Covid-19. Meanwhile, bulk carrier freight prices were depressed due to reduced shipping demand as global economic activity ground to a halt. This has made buying scrap in bulk more appealing for much of 2020.

At the time of another bulk scrap sale to Pakistan heard in early June, bulk freight from the US West Coast to Pakistan was just \$17 per tonne, Fastmarkets heard. Pakistan's Port Qasim, much like many Indian ports, struggled with congestion and delays at container terminals during the second quarter of the year, bloating container freight costs. Indeed, freight for scrap in containers from Long Beach, California, to Qasim was \$43 per tonne in the same week as the bulk deal.

Furthermore, a Bangladeshi mill, which

usually relies on container scrap to supply its imports, also dipped into the market for several bulk cargoes from Japan and the US during March and April amid similar freight and supply concerns. The US exported a mammoth 274,640 tonnes of steel scrap to Bangladesh in May, according to US government stats, up 69.4% from 104,472 tonnes in April.

## NEW METHODS OF TRADE

Steelmakers in Bangladesh have had to resort to inventive tactics to ensure the reliable flow of sponge iron from India in recent months. Many mills in Bangladesh - particularly those in the capital city Dhaka - are reliant on the intake of India-origin sponge iron. India's Covid-19 lockdown had restricted the sale of sponge iron into Bangladesh, which sources said had forced some mills to temporarily close their furnaces.

This situation gradually improved but by June, with the Covid-19 crisis mounting in Bangladesh and India, road traffic from West Bengal to Bangladesh became increasingly slow with large pile-ups of trucks at the border, thus forcing Bangladeshi buyers to seek alternative arrangements to receive their DRI.

As is always the case when the trade faces such logistical issues, solutions are found to fix the problem. In this case, Fastmarkets heard that Indian sponge iron was starting to be transported to Bangladesh by barge to circumvent the border blockages. At least one mill in Bangladesh has now bought several barges of DRI in the last months to supplement steel scrap in their production mix.

## PRICES ON A ROLLERCOASTER

When offering a bulk steel scrap cargo, exporters from the United States West Coast and Australia often have the option of offering to the major markets of South Korea, Vietnam and Bangladesh. If the seller has the option to sell in containers, they can also offer to Taiwan. Under our previous name, Metal Bulletin, Fastmarkets has published prices for Taiwan import scrap since 2015, for Vietnam import scrap since 2018. This year, Fastmarkets also launched new prices for the



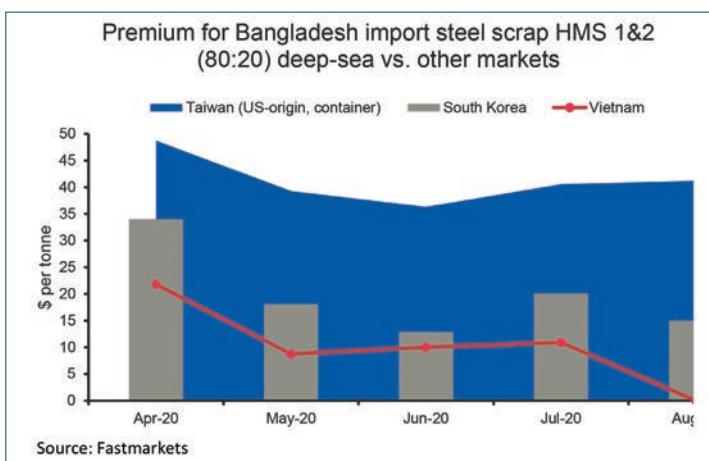
India's covid-19 lockdown had restricted the sale of sponge iron into Bangladesh

# ★ ANALYSIS ★

## S. ASIAN STEEL SCRAP MARKETS



**TO SUPPLEMENT** its expanded Asia steel scrap coverage, Fastmarkets recently launched a free Scrap Spotlight service. The service features weekly free price updates for key Asian markets including Bangladesh, Vietnam and Japan which can be used as reference prices in negotiations, selected free news stories, market statistics and an in-depth look at our scrap price methodologies. You can sign up for free at: <https://www.fastmarkets.com/commodities/scrap-and-secondary/asia-steel-scrap-spotlight> or simply scan the QR code below.



markets of South Korea and Bangladesh.

In theory, the only difference between prices in these bulk, deep sea markets should be the cost of freight and handling at the various destination ports for buyers. But, as Fastmarkets scrap pricing shows, the reality is quite different. Indeed, the volatile pricing picture during the Covid-19 crisis has highlighted the importance for recyclers, traders and buyers to follow bespoke scrap prices for individual markets rather than a catch-all 'Asia scrap' price.

As the chart illustrates, the premium for Fastmarkets' Bangladesh bulk HMS 1&2 (80:20) import price over Fastmarkets' Viet-

nam, Taiwan containerized and South Korea prices has varied wildly month-to-month since it was launched in March. The highest premium for the Bangladesh price over Vietnam in this period came in April, with a whopping average \$22 per tonne as Bangladesh mills were deep in a buying spree for scrap cargoes. At the time of writing, the lowest gap has come in August, with US deep-sea cargoes heard sold to both Bangladesh and Vietnam at the same price for HMS 1&2 in the first week of the month.

» **Mr Allen** is Senior Price Analyst and Reporter at FASTMARKETS





# Vanta™ Element Handheld XRF Analyzer

## Affordable Alloy ID

### Affordable, Rugged, and Connected

Confidently Verify and Sort Metals and Alloys

The Vanta Element alloy database includes the most commonly used alloys in scrap recycling and manufacturing, but is easily customized for proprietary or additional grades.

- Non-ferrous alloys
- Low-alloy steels
- Copper alloys
- Nickel and high-temp alloys
- Precious metals
- Aluminum alloys

[www.olympus-ims.com/vanta-element](http://www.olympus-ims.com/vanta-element)

**OLYMPUS®**

OLYMPUS MEDICAL SYSTEMS INIDA PVT.LTD  
Ground Floor, Tower - C, SAS Tower, The Medicity Complex,  
Sector - 38, Gurugram, 122001, Haryana.

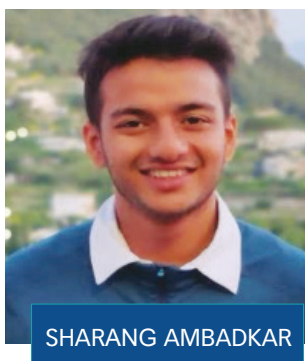
For enquiries - Please Contact:-  
Email.: [srinjay.gogia@olympus-ap.com](mailto:srinjay.gogia@olympus-ap.com)  
Ph.: 9558808696/9953275537

## ★ ENTREPRENEURSHIP ★

### WASTE

# TILE THE PILE

TWO YOUNGSTERS FROM MUMBAI ARE HELPING TO CLOSE THE LOOP IN PLASTICS BY CREATING INNOVATING SUSTAINABLE SOLUTIONS, WHICH COULD BE SCALED UP ACROSS THE COUNTRY



SHARANG AMBADKAR



VARAD TOLE

**T**he aggressive utilization of finitely available natural resources, followed by generation of enormous amounts of non-biodegradable waste has vandalized ecosystems and rendered us vulnerable in the face of pressing problems, such as space management due to expanding landfills, accumulation of trash, and the disruption of ecological balance.

Of the many products developed to uplift the human lifestyle, plastic, by far, is the most convenient and commonly used synthetic commodity. Irrespective of its benefits, plastic is the most uncontrolled material discarded from households and industries infesting the landfills leading to detrimental consequences. Similarly, to supplement the needs of our developing economy, millions of met-

ric tonnes of natural resources are exploited for the construction and building industry. Though a very necessary element in our development, very little thought has been given into proper discarding of construction debris. Such leftover construction and demolition debris is responsible for not only depleting valuable natural resources such as sand, limestone, etc. but is also a major contributor to greenhouse gas emissions during the production of these materials.

In a city like Mumbai, which generates around 7200MT of waste daily, around 20% of the waste is mixed plastic waste and construction & demolition debris, which is the result of improper disposal regulations. The 20%, though small, ultimately contributes to over 525600 MT of waste annually. On the other end, recycling of construction materials can improve environmental quality as 5% of the greenhouse gases are dispersed during the process of conventional cement production, and the same debris can be used as a raw material for creating new products and close the loop in plastic management, eliminating the need to produce virgin plastic and concrete.

This is not just the case of Mumbai! In fact, the facts are more alarming considering the waste generated pan India.

To recover this material and obtain sustainable alternatives for regulating the consumption of generated waste and support our economy to be circular, Mumbai-based FeelGood EcoNurture LLP have come up with an efficient solution.

Here is the story of FeelGood EcoNurture: FeelGood EcoNurture LLP, a Mumbai based start-up, is a budding venture driven by the vision 'Waste is nothing but a Resource conceived as waste' to encourage our country with recyclable systems and circular economies. We introduce the concept of 'FG Eco-Tiles'. Like innumerable start-ups who begin their entrepreneurship journeys in car sheds or kitchens and metamorphose into jacks of







their trades. Our story is also not different. Our first amateur attempt at creating a tile from recycled plastic and construction waste used a wrought oven from the junk and a handmade wooden mould. We have now established ourselves as mainstream developers of commercially viable FG eco-Tiles, which is the most salient feature of our endeavor.

Why will our products make you Feel-Good? The primary objective achieved through the invention of FG Eco-Tiles is to provide an eco-friendly and sustainable solution to resolve the problem of non-degradable plastic and construction debris, and the exploitation of natural resources.

The processed composite constituting of FG Eco-Tiles is recyclable and so we have a 'bring-back' policy in our business model to incentivize customers and add more material life cycles.

Additionally, no natural resources are utilized during manufacturing, hence making it a completely sustainable and energy-efficient process.

The weight of the paver tiles is significantly less than conventional blocks. However, in terms of strength the tiles are at par with conventional blocks and tend to have a longer life. At the end of its production cycle, the product itself can be reused as a raw material for future production, closing the loop of its life cycle.

The highlight of our production process is the easy processing of the composite and

its transformation into a large number of products, thereby fundamentally enhancing air quality due to reduction in plastic incineration, leading to a drop in carbon emissions and reduction in the consumption of fossil fuels.

All these factors help us to support the United Nations Sustainable Development Goals 2030.

## THE SIGNIFICANCE

FG Eco-Tiles is the potential solution aimed at reducing the plastic waste transported and left untreatable in the landfills. The primary outcome of this processing is the diminished load on landfills, clearing of spaces, reduction in the deposition and disposition of plastic waste into the lands and oceans, and provision of a safer environment to the animals due to cleaner waterways and other habitats.

*With constant improvisations and agile approaches, FeelGood can establish its range of recyclable and sustainable products from waste materials*



# ★ ENTREPRENEURSHIP ★

## WASTE

Other than the health and safety of the environment, FG Eco-Tiles has a sustainable business model. The generation of revenue from discarded and untreatable waste will impact the economy on a large scale and will assist in providing sources of generating funds. The advantages can be extrapolated to include fostering employment, aligning with Make in India initiatives

Besides, it would help India to represent the country in creating a humanitarian and environmentally cognizant mark on the globe.

### THE CHALLENGES

The reach of our market being embryonic, the specifications call for the advanced technology and resources to scale up their production and pool finances to support the efforts.


Convincing companies to replacing their current choice of materials and shifting to these renewable ones is one of the strongest challenges.

Implementing the idea and scaling up production are the prime targets of FeelGood EcoNurture LLP. A time frame of two months is sufficient to launch our novel product and

create a footprint for FG Eco-Tiles in the relevant markets. Moreover, the range of products that can be manufactured from these raw materials are endless. We have the potential to tap into the road, house construction, and even the furniture industry.

With constant improvisations and agile approaches, FeelGood can establish its range of recyclable and sustainable products from two of the waste materials, which were considered the most difficult to process.

We among many budding young entrepreneurs who care for a cleaner and greener tomorrow would like to make a small attempt to sensitize the youth about transforming any waste to ware. After all, the innovators of today are the guardians of a worthy tomorrow!

  
*The highlight of our production process is the easy processing of the composite and its transformation into number of products*







**GR Metalloys**  
Excellence through Innovation

**Your Trusted Partner in metal business**





**MANUFACTURES OF ALUMINIUM ALLOY INGOTS OF ALL GRADES**

**📍 GURU RAJENDRA METALLOYS INDIA PVT LTD. 📍 G.R METALLOYS PVT. LTD.**

**Call :** +91 79 40801211/12 ,+91 79 40801222 **Fax :** +91 79 40801201 **Mob. :** +91 99795 11222

101, G.R. House, 8 Gautam Vihar Society, opp.Sukhsagar Complex,  
Ashram Road,Usmanpura,Ahmedabad-380013.

 [www.grmetal.co.in](http://www.grmetal.co.in)  [www.grmetal.in](http://www.grmetal.in)  [jayant@grmetal.in](mailto:jayant@grmetal.in)

## COVER STORY

### ALANG SHIP RECYCLING INDUSTRY



# WAITING FOR THE NEXT TIDE

**EVEN AS INDIA'S METAL SECTOR IS TRYING TO RECOVER FROM NEAR PARALYSIS DUE TO THE RAGING CORONAVIRUS PANDEMIC, THE COUNTRY'S DEMOLITION MARKET IS COMING OUT OF THE DAZE THAT MASSIVE MIGRATION OF ITS LABOUR AND LOCKDOWN IMPOSED RESTRICTIONS ON SHIP ARRIVAL HAVE CREATED. HOW IS THE WORLD'S LARGEST SHIPBREAKING INDUSTRY TRYING TO COPE WITH THE AFTEREFFECTS OF THE SHOCKS AND FINDING ITS WAY BACK TO THE ANCHORAGE?**

**I**n early September 2020, Alang – the largest shipbreaking facility in the world – welcomed one of its pride possessions when it brought to its shores INS Viraat, the world's longest served aircraft carrier belonging to Indian Navy for scrapping. The ship, 70-year-old war veteran weighing about 27,800 tonnes, was brought by Shree Ram Group for Rs 38.54 crore in an auction

conducted by the Metal Scrap Trade Corporation Limited in August. INS Viraat, whose dismantling started on September 29, belongs to those ships that came to Alang when it is limping back to normal shipbreaking operations after the onslaught of the Covid-19.

The coronavirus pandemic has practically paralysed the ship demolition market in South Asia as lockdown measures were introduced across the sub-continent. India saw its dem-



**During the year 2019, a total of 123 vessels were demolished, while during the prevailing year, 85 vessels have been brought to ground zero so far and another 23+ are awaiting tentative schedules to be beached, before going to be hammered.**

olition market coming to near standstill at least for the first six weeks following imposition of lockdown towards the end of March.

“Considering the effects of pandemic on shipbreaking industry, I would say, the impact was huge during the months of March through May...,” said Sana Bhamla of Alang Info, an agency engaged in providing data and information related to the ship recycling industry in Alang.

India ordered suspension of recycling for all ships arriving at Alang whose last port departure was after March 13. Those that departed a port

yards and surrounding industries to their native places following the lockdown. Being a labour-intensive industry, the Alang hub employs around 30,000 workers in normal circumstances, of which about 70-80 per cent coming from states like UP, Bihar, Jharkhand and Odisha.

“With almost all the migrant workers having gone back to their home states, we had only 7,000-8,000 workers working at Alang seriously impacting capacity utilisation in terms of vessel breaking and recycling,” said Vishnu Gupta, President of the Ship Recy-



*More than 80 per cent of labour force comes from Uttar Pradesh, Bihar and some other states. We are facing a difficulty in managing the shortfall.*

— VISHNU GUPTA,  
PRESIDENT, SRIA

earlier than March 13, were allowed at Alang,

though foreign crews were subjected to a quarantine of 14 days on arrival.

Global player in shipbreaking segment, GMS wrote in its report: “Several ships have been detained at Alang anchorage, with authorities refusing to provide anchoring permissions. Even those with Indian crew on board are going through rigorous medical checks, questioning, and procedures, before being allowed entry.”

Speaking at a webinar, senior GMS traders revealed some of the complexities of completing recycling deals during the pandemic when many facilities were closed for business, international flights were halted, foreign crews were not allowed, and there was no scope to dispatch crews for ships sold ‘as is’ in other global locations.

What hit the Alang industry the most was the migration of the labour employed at the

cling Industries Association of India (SRIA).

Hard pressed the industry also put to use workers from diamond, textile, fishing and other industries from the state, with limited success.

After a crew member tested positive for Covid-19 in Alang on June 29, the state government changed the Standard Operating Procedures (SoPs) for Covid-19 by introducing “vessel isolation” at the yard. Instead of the allowing sailors allowed to disembark, now those having Covid 19 symptoms were isolated on board and visited by doctors.

“This helped to minimise the spread of Covid from the ship’s crew to the labourers who worked on the ground,” said Haresh Parmar, joint secretary of SRIA and a ship-breaker at Alang.

According to Mr Parmar, SRIA has created a 200-bed strong quarantine facility at the labour colony operated by Gujarat Maritime Board at Alang. “It also turned two blocks into a quarantine facility. It is a free facility for anyone who needs it at Alang,” he added.

*Having witnessed a sharp fall in the number of vessels docking at the facility, Alang is looking for a fresh lease of life*

## ★ COVER STORY ★

### ALANG SHIP RECYCLING INDUSTRY

Beaching ships for dismantling at Alang have dwindled to four-five ships a month from 16-20 after India imposed a lockdown to slow the spread of coronavirus. The restriction on crew change at Indian ports in the initial days of the lockdown also put a halt to beaching of ships.

Due to the loss of business in roughly three months this year, the industry is expected to have taken a hit of Rs 3,000 crore in its annual turnover which stood at Rs 10,000 crore in FY20.

Alang yards not only supply scrapped steel but is also involved in other businesses, such as selling used ship machinery and equipment from the demolished vessels.



Ship contains more than 95% of steel and in India, ship recycling activity contributes to approximately 1 to 2% domestic steel demand that is approximately 28% of country's total imported ferrous scrap.

In and around Alang and Bhavnagar, there are 110 rolling mills and 70-80 furnaces that use raw materials fetched out of the yards.

About 30% of the scrapped steel from Alang goes to the secondary steel re-rollers in Gujarat, and 30% to the electric arc furnaces and steel mills in Ahmedabad. The rest is supplied to rolling mills and furnaces across the country, especially to those facilities situated from Goa to Punjab.

While the iron and steel is recycled, a ship's remaining parts, like furniture, kitchenware, decor, bedding, etc are sold in bulk to dealers who auction them to merchants who visit the Alang market for their supplies and market them across major cities of the country.



*We have asked the Central Government to bring back the labourers willing to return to work via Shramik trains. Several labourers had been calling contractors to make arrangement for their return.*

— **HARESH PARMAR,**  
SECRETARY OF SRIA

However, as most of the steel rolling mills were shut due to labour crunch and transportation of steel plates was hit due to lack of trucks and drivers, the materials ripped apart from the ships were not sold "As a result, inventories piled up, blocking space inside the yards," said Rohit Agarwal of

#### **Guideship Consulting Service of Bhavnagar.**

The local economy was staggered with demolition activities coming to a standstill during those months, said Ms Bhamla of Alang Info. "Withdrawing of steel and other ferrous and non-ferrous metals was heavily affected. Given the fact that most of the industries in the vicinity to the host city of Bhavnagar are completely dependent on raw materials acquired from demolished vessels, they had to shut down their operations and furnaces," she added.

India's metals sector demand has suffered a significant blow on account of operational difficulties and poor demand resulting from Covid-19.

"The industry players are facing turbulent times currently with volatile scrap/steel plates prices, unfavourable foreign exchange rates and restriction on beaching of vessels, which will lead to increase in the procurement cost. This coupled with unsettling

sales/scrap prices, the margins for ship breakers are expected to remain under pressure in the near term," ICRA wrote, while assessing the impact of Covid-19 on the industry.

Having witnessed a sharp fall in the number of vessels docking at the facility during the two-month long Covid-induced lockdown, the Alang-based ship recycling industry is looking for a fresh lease of life.

After the shipbreaking industry reopened on April 20, there has been a steady influx of ships beaching on the shores for recycling.

From the tonnage point of view, Alang is picking up pace. "Alang works on a reverse mechanism which means when the global economy does not do well lot of ships come to Alang for scrapping," said Mr Agarwal.

"During the year 2019, a total of 123 vessels were demolished, while during the prevailing year, 85 vessels have been brought to ground zero so far and another 23+ are awaiting tentative schedules to be beached, before going to be hammered," informed Alang Info's Usman.

All markets are now pointing in a positive direction, following the excessive losses witnessed during the pandemic where about USD 150/LDT was rapidly knocked off levels across all sectors, wrote GMS in a recent report.

For Week 39, it wrote: "Following the catastrophic falls of around USD 150/LDT during

#### **VESSEL ARRIVALS AT ALANG**

Year/Month	January	February	March	April	May	June	July	August	September	October	November
2019	18	8	9	10	7	15	7	11	7	10	11
2020	20	9	4	-	2	21	11	14	4	-	-

Alang Info



# HITACHI

Inspire the Next

Discover which analyser is best for your business

« LIBS

OR

XRF »



**LIBS – VULCAN+ | XRF – X-MET8000 | OES – MASTER RANGE**

Evaluate your options to prepare for the future. With new technologies like LIBS (laser induced breakdown spectroscopy) emerging, it's always good to make sure that you're getting an analyser fit for purpose.

Call **+91 88796 29558**

or email [contact@hitachi-hightech-as.com](mailto:contact@hitachi-hightech-as.com)

## ★ COVER STORY ★

### ALANG SHIP RECYCLING INDUSTRY



**INS VIRAAAT BELONGS TO THOSE SHIPS THAT CAME TO ALANG WHEN IT IS LIMPING BACK TO NORMAL SHIPBREAKING OPERATIONS AFTER THE ONSLAUGHT OF THE COVID-19.**

the second quarter of the year and with all subcontinent markets now securing tonnage at increasing numbers of late, the 2020 subcontinent recovery seems nearly complete.”

Meanwhile, the world has been witnessing a second wave of Covid infections, particularly across parts of Europe where there are now increasing fears of a second lockdown.

“This comes as at a time when India continues to struggle with record daily cases nearing 100,000 infections, with few signs that this virus is going away any time soon. With more tonnage starting to be seen for recycling, particularly larger LDT VLOCs of late, it is set to be a busy end to the year in all sub-continent locations,” it continued.

GMS has described the prevailing sentiment as steady for India and two other ship-breaking markets in Bangladesh and Pakistan.

Despite the highest daily record of Covid-19 cases being reported across the globe in a single day and an increasingly worrying situation in India, the subcontinent ship recycling markets continue to push on. However, only a slow recovery to pre-pandemic level of production is expected in the coming quarters, with rising infection numbers thought likely to fuel decline in domestic consumption.

“Even now, the fate of Alang still rests in the hands of those employees who majorly hail from Bihar, Uttar Pradesh, Orissa and other eastern states. As of now, these workers are returning, steadily and things have stated to charge up. However, if the government yet identifies the flaws it had left during that unnecessary lockdown, things could yet be different, even while this disastrous pandemic prevailing,” opined Mr Usman of Alang Info.

He said: “Had the government taken assisting measures of waiving off taxes during the lockdown and directed the demolition units and production houses to continue working while imposing strict precautionary guidelines, while on the job, fighting against the virus and utilizing taxation slab for the betterment of their employees, it would have been a huge relief for all those associated with this industry and the after-market buyers.”

Besides other demands, the shipbreakers have asked the Central Government to bring back the labourers willing to return to work via Shramik trains. Several labourers had been calling contractors to make arrangement for their return, Informed Mr Parmar.

According to Mr Patel of Shree Ram Group, the activities at the Alang yard and related industries are getting back to normal. “I expect that from December onwards, the industry is expected to run its normal course, with government support and facilitative measures,”



# ALANG: A MARKET OF ITS OWN

**THE SHIPBREAKING YARDS** located in Gujarat are around 50 km by road from the city of Bhavnagar. They were initially set up in 1983 on a stretch of 10 km long beach with a vast tidal range. Today it is the world's largest shipbreaking site.

Prior to the 1970s, the majority of ship-breaking activity was undertaken in Europe and the United States.

According to data from the NGO Shipbreaking Platform, the last decade has seen over 70 per cent of the estimated 800 vessels scrapped at Alang, Chattogram in Bangladesh or Gadani in Pakistan.

During the past few decades, Alang has emerged as a major centre for ship breaking in the world,

The Gujarat Maritime Board (GMB), a public body running all ports in Gujarat, regulates the shipbreaking yards. The GMB rents out the shipbreaking plots to the shipbreakers on a 10-year lease basis.

The birth of the industry in the area has brought with it numerous jobs to the town's locals. It employs around 30,000 workers with over 3 lakh employed in the industries, including auxiliaries in and around Bhavnagar.

It has transformed into a lucrative industry for the state government contributing approximately Rs 6,000 crore annually.

Alang at present has 120 active recycling yards dismantling end-of-life ships to extract various types of scraps and equipment for recycling and reusing.

Ship contains more than 95% of steel and the scrap value usually depends on the price of steel in the market. In India, ship recycling activity contributes to approximately 1 to 2% domestic steel demand that is approximately 28% of country's total imported ferrous scrap.

About 30% of the scrapped steel from Alang goes to the secondary steel re-rollers in Gujarat, and 30% to the electric arc furnaces and steel mills in Ahmedabad. The rest is supplied all across India.

The Alang Shipbreaking facilities generates about Rs 25000 crores revenue to the exchquers of state and the central governments.

Alang supplies raw materials to rolling mills and furnaces across the country, especially to those facilities situated from Goa to Punjab.

Besides, in and around Alang and Bhavnagar, there are 110 rolling mills and 70-80 furnaces that use raw materials fetched out of the yards at the world's largest ship recycling facility.

While the iron and steel is recycled, a ship's remaining parts, like furniture, kitchenware, decor, bedding, etc is sold in bulk to dealers who auction them to merchants who visit Alang market for their supplies and market them across major cities of the country.

recycling almost half of all decommissioned ships across the globe. Its high tide and gently sloped structure makes it the perfect spot for the process. Owing to this, every year, more than 200 ships breathe their last here.

Till date, scrapped more than 8,000 ships including containers, oil tankers, cargo ships and cruise liners, from all over the world, especially Japan, the United Kingdom, United States, Singapore and Norway.

Old ship parts, furniture, kitchen supplies, generators, bulbs, or linen, etc, whatever can be salvaged, is taken to the market for sale, making Alang market one of the most interesting upcycling market.



*Till date, Alang has scrapped more than 8,000 ships including containers, oil tankers and cruise liners, from all over the world.*

## ★ COVER STORY ★

### ALANG SHIP RECYCLING INDUSTRY

## VEHICLE SCRAPPING HUB AT ALANG?

*Reports about government planning transformation of Alang with setting up of a hub for dismantling and recycling of end of life vehicles have not only unnerved supporters of the proposed National ELV Recycling Policy but also made many potential entrants into vehicle recycling segment sceptical about the viability of the whole business. An analysis*

Even when there is heightened expectation of an announcement of a National Automobile Scrappage Policy, for which a cabinet note is in circulation, reports of Ministry of steel exploring the possibility of expanding and

them to an integrated facility at Alang will also be explored in the project report.

Meanwhile, Ministry of Road Transport and Highways has formulated a note for Cabinet on creation of an ecosystem for voluntary and environment-friendly phasing out of unfit and old polluting vehicles.

The proposed policy, once approved, will be applicable on all vehicles. The policy is understood to be having a fresh round of consultations with stakeholders on the direction of the PMO.

Road Transport and Highways Minister Nitin Gadakri have been a vehement supporter of the policy, which, according to him, once approved, would make India emerge as a hub for automobile recycling hub, in addition to its current status as the leading hub of auto manufacturing.

He is confident that easy availability of key raw materials from vehicle scrapping will also help India to bring down automobile prices by up to 20-30 per cent.

The government's amendments to motor vehicle rules in July last year have initiated the much-needed course correction.

The local shipbreaking industry is bullish about the opportunities that the proposed auto recycling hub in Alang could bring to the industry and the region. Especially so at a time when the Indian ship recycling industry is facing stiff competition from Bangladesh and Pakistan facilities. Shipbreaking yards in Bangladesh and Pakistan are better placed to offer attractive prices for vessels and they enjoy better domestic steel prices than their counterparts in Alang.

Says Mukesh Patel, Chairman of Shree Ram Group, one of the leading and modern ship recycling facilities in Alang, "If one could generate scrap through proper recy-



*If one could generate scrap through proper recycling from automobiles, it is the best thing to do, anywhere in the country. And if the Government plans to set up automotive dismantling and recycling hub at Alang, could there be a better news than that for Alang?*

— **MUKESH PATEL,**  
CHAIRMAN,  
SHREE RAM GROUP

developing Alang shipbreaking yard into biggest scrap facility for vehicles have stirred a hornets net.

According to reports, the ministry will initiate a detailed project report which would outline how the shipbreaking yard could be expanded and converted into an integrated facility for vehicle scrapping.

The feasibility of collecting scrapped vehicles from across the country and bringing







*Definitely, Alang is strategically well located to recycle imported automotive scrap. But should it be the only recycling hub in India, it's questionable!!!*

— **RIKAB MEHTA,**  
PRESIDENT, BOMBAY METAL EXCHANGE

cling from automobiles, it is the best thing to do, anywhere in the country. And if the Government plans to set up automotive dismantling and recycling hub at Alang, could there be a better news than that for Alang?

But there were pragmatic voices like that of Rohit Agarwal of Guideship Consulting Services, Bhavnagar. He says, "Alang is a favourable destination for ship recycling geographically, whereas automobile recycling could be done from anywhere; it depends on which place has got more number of vehicles. The nearby places would be Mumbai in Maharashtra and certainly the NCR region." According to him, market feasibility and other studies should be conducted to see the locations that are best suited and from where one could get lot of supplies.

Across the country, expectation of the announcement of a National Policy for Vehicle Scrapping and Recycling has

driven many players - ranging from corporates to PSUs and large and medium industries from recycling and other related sectors across the country - to jump into the bandwagon. Their rush is understandable: According to back of the envelop calculations, total cumulative availability of End of Life Vehicles (ELVs) is expected to jump from 100 million today to 178 million in 2025 to 300 million by the year 2030.

Consultants are scurrying with plans for companies to leverage the growth opportunity that such a policy could unleash in almost all major cities in the country.

A Mumbai-based consultant in shipping and logistics said: "An effective ELV recycling eco-system requires the coordinated and integrated effort and resources of multiple stakeholders at strategic locations in a vast country like India. The dynamics of the automobile population in the country implies that



## ★ COVER STORY ★

### ALANG SHIP RECYCLING INDUSTRY

the issues connected with the sector should be addressed with a pan India approach and not with a single point or single location programme. Alang lies at the far end of the Western India and is far removed from most of the metros and major cities of the country which are home to large number of vehicles – ELVs or not. In that respect, Alang could not be an ideal candidate for the hub project.”

Rikab Mehta, President of Bombay Metal Exchange raised a pertinent question when he opined: “Definitely Alang is strategically well located to recycle imported automotive scrap. But should it be the only recycling hub in INDIA, it’s questionable!!!”

According to him, the transportation cost of moving steel from different assortment places to the shredding unit can get restrictive. “India needs enormous number of medium/little shredders serving local areas. Regularly a shredder serves 20-30 recycling units and is found near regions where fin-



*Alang is a favourable destination for ship recycling geographically, whereas automobile recycling could be done from anywhere; it depends on which place has got more number of vehicles. The nearby places would be Mumbai in Maharashtra and certainly the NCR region. Market feasibility and other things should be conducted to see which location is the best and from where one will get lot of materials.*

— **ROHIT AGARWAL,**  
GUIDESHIP CONSULTING  
SERVICES, BHAVNAGAR

ished goods are made to control the transportation cost,” he said.

When asked a leading consultant in Delhi about the feasibility and viability of developing a automobile dismantling and recycling hub at Alang, his answer was an emphatic ZERO, implying lack of understanding of the respective streams of recycling and contradictions inherent in the project planning. “Ship recycling is one industry while vehicle demolition and recycling is another. Both have many different dynamics at work which would be difficult to integrate,” he concluded.

The pressing need of the hour is, according to many plot owners at Alang, modernisation and technological upgradation of the yards. “Even though it is the accepted policy of the Gujarat Maritime Board to phase out all small plots, GMB has not succeeded in phasing out even a single small plot during the last 10 years,” said a member of the Mumbai-based Iron Steel Scrap & Shipbreakers Association of India. “This is primarily because there is no proper amalgamation policy that exists. All practical solutions provided by the shipbreakers to amalgamate existing smaller plots to make way for bigger ones were not taken into account or acted upon by the GMB or the Shipping Ministry,” he added.





**GUARDIAN**  
**CASTINGS P. LTD.**  
**Bones of your home**

**MANUFACTURERS OF TMT BARS FOR CONSTRUCTION USING  
THERMEX GERMAN TECHNOLOGY**



**GUARDIAN CASTINGS PVT. LTD.**

Admn. Off : 415 Mahinder Chambers , W. T. Patil Marg , Opp.  
Dukes Factory , Chembur , Mumbai - 400071. Tel : +91-22-  
6613 5555 Fax: +91 22-2520 5771  
Email : guardiansteels@hotmail.com

## ★ STRATEGY ★

### RECYCLED PLASTIC CONTENT



## SPURRING DEMAND

**W**ashington-based, the Institute of Scrap Recycling Industries (ISRI) has updated its position on minimum recycled plastic content. Its new position encourages efforts that will help spur demand for recycled plastics. ISRI says its position also aims to increase the commitment by stakeholders throughout the supply chain to ensure plastics are responsibly manufactured, collected and recycled into new products.

***The association's position on minimum recycled plastic content supports:***

- legislation that expands the use of recycled plastic in applications that are appropriate, noting these levels will vary by application and type of plastic;
- efforts by manufacturers and brand owners to increase the use of recycled plastic resin beyond legislated levels and applications when possible;
- manufacturers incorporating the principles of Design for Recycling to ensure their products are easily recycled;

ISRI ADOPTS NEW POSITION  
ON MINIMUM RECYCLED  
PLASTIC CONTENT IS  
INTENDED TO ENCOURAGE  
ITS USE IN MANUFACTURING  
OF NEW GOODS





*ISRI's position also aims to increase the commitment by stakeholders throughout the supply chain to ensure plastics are responsibly manufactured, collected and recycled into new products.*

— MR BAGARIA



- stakeholder efforts that seek to increase plastic recycling through public education, outreach and advocacy to meet growing demand for recycled plastic; and
- efforts that look at the life cycle assessment of a plastic product to help manufacturers make informed choices on the inclusion of recycled plastic resin.

According to ISRI, the association's updated position on recycled content in plastic content aligns with its Design for Recycling principles, which encourage manufacturers to consider the ultimate destiny of their products during the design stage of development.

"Plastics are a diverse, versatile group of materials that are used in nearly all aspects of daily life, from life-saving medical supplies to light-weight food packaging," ISRI says. "However, despite the benefits plastics offer, many remained concerned about high levels of plastic waste entering the natural environment. To avoid further environmental harm, it is imperative that all plastics be handled responsibly at end of life."

ISRI Plastics Division Chair Sunil Bagaria of New Jersey-based GDB International supported the intent of the bill, saying it is imperative that all plastics be handled responsibly at end of life and using recycled plastic to manufacture new products is environmentally responsible and strengthens the economy by creating jobs and investment opportunities. However, he expressed concern with certain aspects of the proposed legislation, requesting clarification on certain

draft amendments that were circulated prior to the hearing.

**According to Mr Bagaria, who is also a very active member of MRAI, the concerns include:**

- **Manufacturer Exemption:** In the draft amendments, an exemption is added to the definition of "manufacturer" for an establishment that produces, packages and sells a product directly to a consumer at retail.
- **Reusable Plastic Film Carryout Bags:** Unlike other products, there is no set definition for a reusable plastic film carryout bag, and no threshold set for the thickness of a bag subject to the requirements.
- **Rigid Plastic Containers:** Since rigid plastic containers are utilized in many different ways, including nonfood applications, they could easily have the same recycled content requirements as beverage containers.
- **Plastic Trash Bags:** The current 10 percent recycled content requirement could be raised because the product can easily incorporate more recycled content while maintaining the structural integrity of the product.
- **Manufacturer Waivers:** In Section 8.a., the draft amendment refers to "other anomalous market conditions."

Mr Bagaria is confident that if the points are addressed S2515 will help spur the demand for recycled plastics, keep and increase jobs, wages and overall economic impact.

**IN THE MIDST** of the worst public health emergency in a century, Senator Bob Smith introduced the most potentially significant piece of recycling legislation since the Mandatory Source Separation and Recycling Act in 1987!

Introduced on June 4, S2515 would establish recycled content requirements for plastic containers, glass containers, paper carryout bags, reusable carryout bags made of plastic film, and plastic trash bags sold or offered for sale in the State, and prohibit the sale of polystyrene packaging peanuts.

Recycled content legislation is exactly what is needed to address international market disruptions for commodities, primarily brought about by actions taken by China and other Southeast Asian countries.

Recycled content legislation also provides what is needed to "close the loop" to make recycling a key element of a sustainable future.

Recyclers have long dreamed of "content legislation" imposed on manufacturers to require realistic percentages of post-consumer material to be included in new products and packaging to stimulate markets. If passed, S2515 would represent the most progressive and comprehensive recycled content legislation in the country.

As proposed, S2515 would require, most significantly, a three-tiered content standard for plastic beverage containers with 10% between 2022 – 2025, 25% between 2026 and 2030 and 50% after 2031.

S2515 takes a giant step in closing the loop of the three "chasing arrows" of recycling by providing a framework for market development in plastics, glass and paper recycling.

**Recycled content legislation is exactly what is needed to address international market disruptions for commodities**



## ★ RESEARCH ★

### ALUMINIUM RECYCLING

RECYCLING OF ALUMINIUM SCRAPS IS WIDELY PRACTICED IN INDIA. HOWEVER, RECYCLING THE SECONDARY METAL FOR INDUSTRIAL USES CALLS FOR SPECIAL CARE AND ATTENTION.

**DR. C. BHAGYANATHAN** SHARES SOME OF THE INSIGHTS FROM THE RESEARCH PROJECTS THAT HE HAS EXECUTED IN THE RECENT PAST



DR. C. BHAGYANATHAN

# TRENDS & CHALLENGES

**A**luminium has become a vital metal finding applications in most manufactured components. It has replaced most metals and is the most used metal second only to steel. India's aluminium consumption per year is nearly 3.3 million tonnes. The production of one metric tonne of aluminium from bauxite requires about 17000KWh of electricity while the same amount of recycled aluminium consumes nearly 750 KWh which substitutes primary aluminium with a gain of 95 % energy.

The treatment of aluminium scrap to produce new aluminium alloys is an alternative to primary aluminium production. Globally aluminium has been recycled since 19th century from multiple aluminium scraps based on the type of alloys. Currently, the annual





*Ingot casting and continuous casting challenges are elements that shape the technology trends in this sector. New machineries for the aluminum industry should focus on the generation of high-quality aluminum scrap flows from contaminated or mixed scrap flows*

— DR. C. BHAGYANATHAN

demand for secondary (recycled) aluminium is 1.1 million tonnes; by 2021 it is expected to reach 1.5 million tonnes. It was reported that about 90% of secondary aluminium consumed was imported even though a significant amount of scrap is generated in the country.

While most of pre-consumer scrap come to the recycling facility directly from manufacturing sectors, post-consumer scrap passes through an extended network of metal merchants and waste management companies. The scrap collection is largely unorganised combined with insufficient awareness, leading to a major proportion of scrap going to landfill rather than recycling. The recycled aluminium presents a certain amount of impurities in the form of iron, magnesium, silicon, nickel, copper, zinc, manganese, lead, chromium, vanadium etc.

The main problems arise during re-melting of the aluminium scrap, where contamination happens from surfaces as well as from the surface oxide of the scrap itself. After the melting process, roughly 10% of the charge is lost owing to the formation of oxides and slag removal process. It was also shown that unsettled transfer and pouring of the melt increases the metal losses all the more. During the melting of the charge in the crucible, the surface oxide of the material may thicken, becoming often micrometres or even millimetres thick. Thus, the recycling/re-melting of aluminium is not straight forward and simple, it requires extra attention since quality is of central importance for the final product.

Experimental works carried out through the research at our institute showed very poor yield on powdered and less density-sized turning, boring and particle-sized compared to the bulk and structured scrap. These scraps were contributing more from the machine shop or shop floor of the manufacturing industries. On recycling the turning and boring scraps the silicon threads were formed and hence two methods namely direct incorporation and immersion techniques were suggested to be carried with controlled environment resulting an yield up-to 55-60%. Research works were also carried on to reduce the losses of magnesium in recycled aluminium when treated to high-



**THE RECYCLING/RE-MELTING OF ALUMINIUM IS NOT STRAIGHT FORWARD AND SIMPLE, IT REQUIRES EXTRA ATTENTION SINCE QUALITY IS OF CENTRAL IMPORTANCE FOR THE FINAL PRODUCT.**

er temperature without addition of any magnesium in the recycled molted metal. These experiments have been of prime importance on reduction of iron from molten aluminium which is a major aspect that is yet to be addressed with industrial relevance. Since the solid solubility of iron in aluminum is below 0.05% at equilibrium, majority iron forms second phases in aluminum. The binary Al-Fe and ternary Al-Fe-Si phases are the main Fe-rich phases in aluminum alloys. Among all the Fe-rich phases,  $\gamma$ -AlFeSi is thought to be the most deleterious, and most efforts have been devoted on how to avoid the formation of  $\gamma$ -AlFeSi.

The other detonating factor in recycling the aluminium compared to the primary al-



*The country has a long way to go before it can become a major aluminium recycler and feed the secondary metal market which is dependent on imports*

## ★ RESEARCH ★

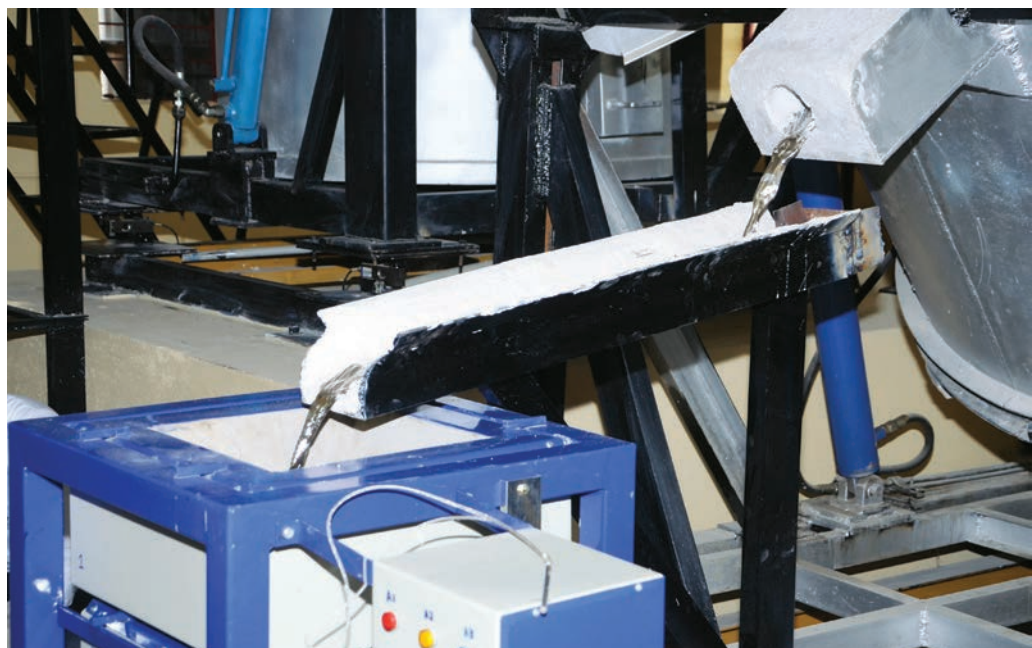
### ALUMINIUM RECYCLING

**THE CURRENT RECYCLING RATE OF ALUMINIUM IN INDIA IS 25%, WHILE THE WORLD AVERAGE STANDS AT 45%. THE COUNTRY HAS A LONG WAY TO GO BEFORE IT CAN BECOME A MAJOR ALUMINIUM RECYCLER AND FEED THE SECONDARY METAL MARKET WHICH IS DEPENDENT ON IMPORTS.**

uminium alloy is detainment of low mechanical and metallurgical properties even though the spectrum analysis (chemical composition) shows the required alloying characteristics. To improve the mechanical properties an addition of certain rare alloying elements becomes necessary. Apart from the above challenges we had included treatment of assorted scraps which is the most challenging one to produce the aluminium alloy ingots.

Therefore, ingot casting and continuous casting challenges are elements that shape the technology trends in this sector. New machineries for the aluminum industry should focus on the generation of high-quality aluminum scrap flows from contaminated or mixed scrap flows, enabling closed-loop recycling within alloy groups, increasing the quality and composition of the melt before casting (analysis), and improving control of the recycled aluminium quality.

The current recycling rate of aluminium in India is 25%, while the world average stands at 45%. The country has a long way to go before it can become a major aluminium recycler and feed the secondary metal market which is dependent on imports. A statistical record shows that India will be able to save about 800,000 tonnes of bauxite reserves each year if it can increase the recycling rate from 25% to 45%. Extensive analysis show that the recycling plants in Asia-Pacific are more focussed towards re-



search to develop technologies for efficient aluminium recycling.

Now, it is found that it is very difficult to cater to the needs and requirements of aluminium alloy for the various industries like automobile, valve and other engineering and non-engineering sectors due to constraints in importing alloys from our neighbouring countries. We are also facing problems in importing pure alloy scraps from other countries. The SME's and start-ups should use this opportunity to produce the aluminium ingots with minimum cost.

» (Dr. Bhagyanathan is Associate Professor, Dept of Mechanical Engineering, Sri Ramakrishna Engineering College, Coimbatore. He along with other investigators of the project would like to thank the Department of Science (DST), TDP division, Advanced Manufacturing Technology programme for sponsoring the project on "Recycling of Aluminium Scraps for Industrial Applications" for providing timely advice through project review meeting. We also thank the Management, SNR Sons Charitable Trust, Principal and Head of the Department – Mechanical Engineering, Sri Ramakrishna Engineering College, Coimbatore for their continuous support in completion of this project)





**METALSCRAP RECYCLING (M) PVT LTD.**

**WE ARE ALWAYS IN THE MARKET FOR:**

**SHREDDER** – Zorba • Zurik • Heavies • Twitch

**BRASS** – Honey • Hairwire • Ocean

**ALUMINIUM** – Taint Tabor • Tense • Wheels • Radiators • Talk • ACSR

**Lead Scrap** • Wheel Weights

**CABLES** – Copper/Lead • Aluminium • URD

E-Motors • Meatballs • Stators • Alternators • Starters • Auto AC Pumps

**THE RELIABLE SOURCE FOR NON FERROUS SCRAP**

**OUR OFFICE**

613, Laxmi Plaza, Laxmi Industrial Estate, Off New Link Road,  
Andheri (West), Mumbai - 400 053. Maharashtra. INDIA.

Mob: +91-98204 79933 / +91-98201 14447

Tel: +91 22 6692 4413

Email: [metscrap@metscrap.com](mailto:metscrap@metscrap.com)



## ★ OUTLOOK ★

### CIRCULAR ECONOMY 2.0

# WHERE NOTHING IS WASTED!

IN THE NEW OLD NORMAL, WE MIGHT HAVE TO THINK BEYOND JUST A CIRCULAR ECONOMY IF HAVE TO WORK TOWARDS A BETTER LIFE ON OUR PLANET AND ITS INHABITANTS, SAYS **SAMIR JOSHI**, PH D.



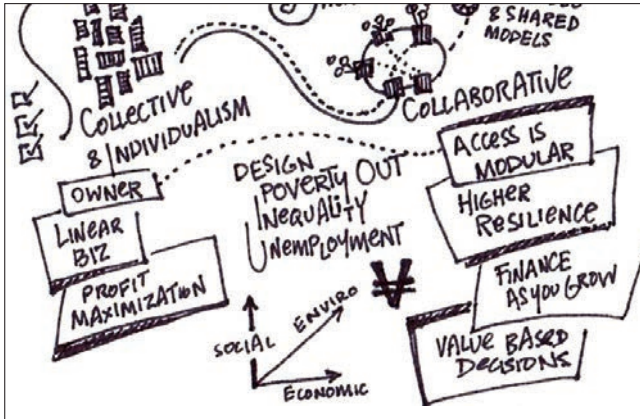
**SAMIR JOSHI**  
Ph D.

**T**he concept of the Circular Economy in itself is mind-blowing as it imitates natural cycles through feedback loops at several levels of our current extraction, production, and consumption chains. Mind-blowing in the multidimensional benefits that could be hidden, where abundance could take the lead over the scarcity of resources such as water, food, fossil fuels, and other precious metals that one needs in our societies today. The main objective of such a framework being the decoupling of our resource intakes versus our thirst for constant economic growth — as





**For everyday packaging—chip bags, candy wrappers, cheese pouches—these are not as easy to collect via a reverse-logistics system like with the batteries.**



cautiously design the upcoming decade in such a way that, instead of diminishing the value of the assets which we depend on — with short-term decisions — we could increase it by setting us up for an abundance of food, non-food nutrients, and technical goods, to fulfill all our needs. This also means that, in the current economic framework, growing economies will not have enough resource access — or at a cheap enough cost — to expand as stagnating economies previously did. And we are talking here about the biggest part of the world population.

## THE SPHERICAL ECONOMY CONCEPT

The spherical economy as the next-generation cir-



returns always need to be higher than the original investment. Through carefully designing our products and services, through focusing on nurturing and caring for all the elements that we have invented for the right functioning of our economy, and with the understanding that all these elements and sub-parts thereof have a specific role to play within it, this set of principles and concepts intend to regenerate our economy by a sound comprehension and alignment with environmental patterns — and not to limit ourselves to them, i.e. if we align ourselves well with these configurations, there is barely any limit to endless innovation!

According to Accenture — under an advanced scenario — we can close the expected resource gap of 40 billion tons (optimist forecast), which are needed by our economies to keep flourishing, by 2050. What does it tell us? Well, it means that we have the opportunity to

c u l a r economy; may be “circular economy 2.0.” Because it’s not just a simple loop. For instance, it’s not just a matter of taking old PET bottles and turning them into new PET bottles. Rather, when we collect PET bottles, that material should be available to make whatever new product is the best use of the material. This is what happens in nature. So we need to recognize that if we want to have an optimized system for technical nutrients (things like plastics), we have to be willing to think about all of the interconnected loops. That gives a much better opportunity to create a resilient system that provides better sustainability benefits to the planet. One needs to think bigger picture.

*We need to recognize that if we want to have an optimized system for technical nutrients, we have to be willing to think about all of the interconnected loops*

## ★ OUTLOOK ★

### CIRCULAR ECONOMY 2.0

#### ROLE OF RECYCLING INDUSTRY IN THE SPHERICAL ECONOMY

These companies are critical because we have to get the materials back and put them back in the system. For some materials, that's relatively easy to do, and for others, it requires specific legislation to drive the collection. Car batteries, for instance, are recycled at a very high rate because states have fees on old batteries, which helps pay for the collection and shipment of those materials to be recycled. That's an example of how we've created a system to get the recyclable materials back—and also keep the hazardous materials inside the battery from escaping into the environment.

For everyday packaging—chip bags, candy wrappers, cheese pouches—these are not as easy to collect via a reverse-logistics system like with the batteries. There are a lot of them, and they're very lightweight—so to effectively collect these types of items, one needs to aggregate.

This is the concept put forth by Jeff Wooster, global sustainability director at Dow. Dow is a materials science leader, committed to delivering innovative and sustainable solutions for customers in packaging, infrastructure, and consumer care.

Dow has a whole range of projects designed to make the system that we operate more efficient. It's relatively straightforward for an individual company to work on a small sustainability project that only impacts their organization. It's more challenging to work on a project that affects several organizations. And it's even more complex to work on a project that affects the whole system. But one is seeing companies and NGOs and governments starting to think more holistically. They are trying to determine what the system requires to be more successful and then put in place programs that help drive in that direction.

Dow has several commitments on sustainability that they announced—one of which is to reduce the amount of plastic packaging that ends up in the environment, which is outside of our immediate control but within our influence. They are also working to make all packaging recyclable, after doing the job of collecting and reusing them.

Aligning our economic world with natural cycles seems to be the right (and wise) thing to do. But are we ready to implement such a new framework? Are we aiming in the same direction, i.e. a better life for all, or do we transpose our current model into a more circular one without genuine systemic changes? And, do we want it, this better life for all?

If so, to achieve this vision, we might have to think beyond just a circular economy as it is designed today: with the same corporate powerful actors, in the same financial paradigm, replicating current human interactions and power relations. In a sea of challenges, building a circular economy can be achieved as we learn the lessons of the now old new normal to hit the intended gigantesque intentions for a better life on our planet and its inhabitants.







# WE'RE THE TOTAL WASTE MANAGEMENT SPECIALISTS



CIRCULAR  
ECONOMY



MINIMISING WASTE AND MAKING  
THE MOST OF RESOURCES

**REGISTERED OFFICE:**

15/16, Govind Bhavan, Chincholi,  
S. V. Road, Malad West,  
Mumbai-400 064 MH-India  
Ph: 022 28725946 / 022 2872 1734

website: [www.shaktiplasticinds.com](http://www.shaktiplasticinds.com)

## ECO RECYCLING

# SPREADING THE WINGS

THE MUMBAI-BASED E-WASTE RECYCLING COMPANY UNVEILS PLANS TO INCREASE ITS FOOTPRINT IN INDIA AND ABROAD

**E**co Recycling, one of the leading organized players in the e-waste recycling industry in India, is setting up a Material Recovery Facility (MRF) spread over in 50,000 sq. ft. with a processing capacity of 50,000 MTPA of end of life devices near Bhiwandi, Thane, Maharashtra.

Announcing the plans at the company's 26th Annual General Meeting recently, BK Soni, CMD said that the facility will not only be equipped to process IT, telecom, electrical equipment & lamps, it will also add some more end of life items for recovery of all kinds of plastics, glass, metals and other useful material as well as hazardous substances.

Mr Soni said the Company is gradually increasing fee-based services for its clients in India and in other countries. "As a matter of global footprint, Ecoreco is presently serving in 20 countries and gradually enlarging wings either directly or with the help of partners to reach 50 countries in near future."

Ecoreco has enlarged its own fleet of vehicles for transportation of e-waste from all the major cities and have also added Recycling on Wheels for shredding proprietary and valuable devices at the client's location. This new service along with Data Destruction on Wheels, Lamp Recycling on Wheels have established great credibility of the com-



» AT YOUR SERVICE: Recycling on wheels

pany and has enhanced the client's trust & confidence in Ecoreco's services, he added.

## EMERGING OPPORTUNITIES

According to Mr Soni, the outbreak of pandemic has necessitated global manufacturing giants to look at India for alternate manufacturing base, as a de-risking measure. This goes very well for the country and several domestic players across industries. "India has emerged as the preferred destination and stands to gain immensely as major manufacturing hub for various communication, computation and electrical devices. "Eco Recycling being no exception is quite motivated about the emerging opportunities.





*If we go by the Central Government's estimate of consumption of electronic equipment of \$400 billion by 2025, e-waste generation by 2030 should be of Rs 150,000 crores.*

— MR SONI

Further, in tune with Prime Minister's Atmanirbhar Bharat Policy, the Government of India has also taken commendable steps to boost domestic manufacturing & exports. As many as 22 domestic and international firms—including Apple's contract manufacturers and Samsung, Lava, Dixon, etc. have lined up aggressive plans for setting up manufacturing base for production of mobile phones in India.

The recent investment lined up under the Government's PLI scheme is expected to produce around \$150 billion of mobile phones over the next five years in India. This additional production is likely to generate around 50,000 crores of worth of commodities on recycling out of additional e-waste so generated. "If we go by the Central Government's estimate of consumption of electronic equipment of \$400 billion by 2025, e-waste generation by 2030 should be of Rs 150,000 crores. The above numbers are very large to impact the environment if e-waste is not processed scientifically and a direct impact on the exchequer, if not formally done," he added.

This enhanced opportunity for e-waste business for India coupled with strict adherence of the already prevailing Extended Producers Responsibility (EPR) Policy, will generate significant volumes and business

for the technology equipped and compliant e-waste recyclers, he said, adding that his company is appropriately placed to gain substantial market share in the space.

The chairman said the company is gradually focusing and increasing its revenue from services also. He informed the meeting that Ecoreco is also increasing emphasis on new geographical regions for inorganic growth either by acquisition or building long-term association with further investment in process & technology.

In order to bring behaviour change, the company has started number of action cum awareness programs, which include installation of Eco-Bins at various educational, commercial and public places to drop small items of e-waste, which will gradually enhance their inclination towards environment as against monetary value. During the year, Ecoreco has launched a mobile application called BookMyJunk ([www.bookmyjunk.com](http://www.bookmyjunk.com)). Citizens can avail this facility whereby the company's dedicated team will collect e-waste from their doorstep at no cost to them.



## 'INDIA NEEDS METAL REFINERIES'

**CONSUMPTION** of electrical & electronic devices is directly related to the socio-economic growth and therefore generation of e-waste should not be considered as a problem but a by-product of our enrichment.

United Nations University (UNU) states that global e-waste will increase by 38 per cent between 2020 and 2030. About 53.6 million tonnes (MT) of e-waste was generated globally in 2019 which is nearly 21 per cent increase in just five years. Asia generated the greatest volume, 24.9 MT of e-waste in 2019, followed by the Americas at 13.1 MT and Europe 12 MT.

The study further mentions that during 2019, less than 18 per cent of the e-waste was collected and recycled, whereas the balance quantity was either dumped or burned to recover fraction of the reusable commodity

"India needs to also set up Metal Refineries, so that the increasing requirement of valuable metals are also locally met rather than spending foreign currency on the same," said Mr Soni.

*Ecoreco is presently serving in 20 countries and gradually enlarging wings either directly or with the help of partners to reach 50 countries in near future.*



» A shredder at the company's facility at Vasai, near Mumbai

★ FOCUS ★

NEPRA



# INNOVATING IN THE AGE OF SDGS



AHMEDABAD-BASED NEPRA HAS TRANSLATED ITS PHILOSOPHY TO SERVE SOCIETY FOR ITS WASTE MANAGEMENT NEEDS AND FOR A CLEAN, GREEN, HEALTHY TOMORROW. ITS WORLD-CLASS FACILITY IN INDORE STANDS WITNESS TO IT. A REPORT



**Built in collaboration with Indore Smart City Development Limited, Nepra's automated MRF at Indore is equipped with technologically advanced waste sorting mechanisms under hygienic and safe conditions and has the capacity to process 300MT/day**



**SANDEEP PATEL**  
CEO, Nepra



The rate of waste generation exceed the nation's growth in waste management services. Inefficient waste collection, treatment and recycling is the reason behind present waste crisis. It can be devastating if we keep growing, consuming, producing and dumping waste without getting it sorted. Waste management in our country is largely moved by the informal sector. Waste in the country is majorly hand sorted which is not only time consuming and labour intensive but also hazardous to health. Moreover, looking at the pace and mixed manner at which the squander is generated such methods are highly unsustainable. Waste pickers work with daily life risks, sorting and recovering waste from poisoned environments to earn their livelihood. There is a dire need to include them and create decent jobs for them.

In this context, Material Recovery Facility (MRF) is vital infrastructural development that promotes sustainability through efficient waste management, creation of green jobs, safe and hygienic work conditions, upliftment of bottom of the economic pyramid and inclusion of waste pickers. MRFs are the ones where collected waste materials are sorted into different types (e.g. plastics, paper, metal etc.) and is processed in manners to make it marketable for recycling. It maximizes waste recovery and eliminates scope of landfilling or dumping.

Nepra works in the sustainability space with its main role in the waste management sector. It realises the potential this sector has in creating a large positive social, economic and environmental impact. An inclusive model in all true sense, Nepra strives to align itself with the SDGs and work in line with its targets. The company collects waste for further recovery through sorting and processing at its MRF which are of different capacities, located in several cities. Built on Public Private Partnership in 2019, the Indore MRF is one of its kind and biggest in India. It has the capacity to process 300MT of municipal solid dry waste daily. It is fully auto-

**T**he Sustainable Development Goals (SDGs) are basically set of 17 goals inclusive of all elements of the 3 pillars (Economic, Social and Environment) essential for Sustainable Development. They were formulated in 2012 at a UN conference held at Rio De Janeiro. They were put into action in 2015, post the completion of the 15 year Millennium Development Goals (MDGs). The SDGs have been formulated to ensure that the nations work to achieve economic development guaranteeing social and environmental safety with 2030 targets.

Waste collection and management are amongst the fundamental services to ensure healthy well-being of the society. With present trends of consumption and escalating urban needs; waste reuse, recovery and recycling becomes indispensable to ensure that future generations have enough resources to meet their needs. SDG 11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production) define targets laying emphasis on waste management, waste reduction, recycling and reuse for a resource efficient economy. SDG 8 (Decent work and Economic Growth) and 9 (Industry Innovation and Infrastructure) guides through the importance of technological upgradation and innovation in building resilient and more productive infrastructures.

*Women empowerment through equal opportunities at work with equal pay for equal work*



**Nepra** works in the sustainability space with its main role in the waste management sector. It realises the potential this sector has in creating a large positive social, economic and environmental impact.

# ★ FOCUS ★

## NEPRA



mated and provides employment opportunities to several BOEPs. Women are benefited hugely with independent earning opportunities at the MRF, improved sanitation and equal pay for equal work.

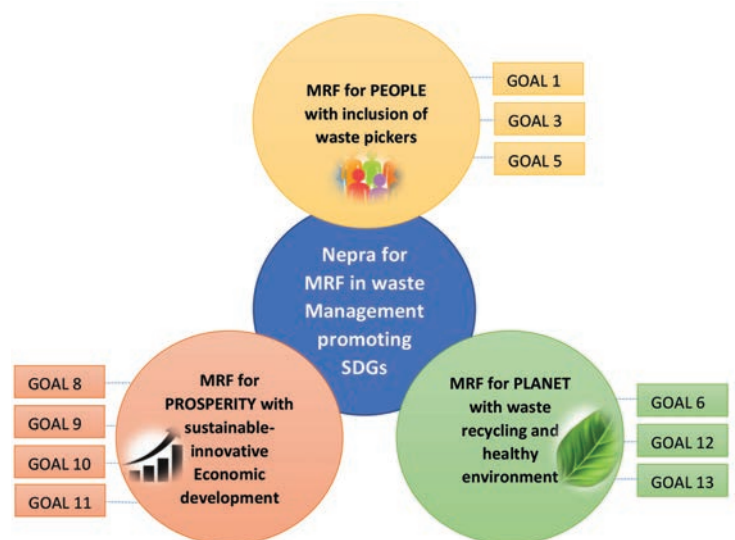
Nepra has innovatively designed its MRF to process Indian waste types and has imported machineries as well. It sorts waste using magnetic belts, conveyors, ballistic separators, air classifiers and optical sorters among many others with manual intervention for quality check. The sorted waste is generated in two streams namely recyclable and Refuse Derived Fuel (RDF) which are auto baled or shredded or grinded for further recycling or co-processing.

Nepra has kick-started introduction of robotics at its MRFs to increase the efficiency. The robotic sorting solution contains state of the art elements for automated sorting of solid waste such as a robot, robotic vision guidance system and our newly developed image processing system based on machine learning and artificial intelligence. The system is targeted to retrieve designated material from the belt of mixed waste and guide it into the silos where it will get collected. The system reduces the overall operational cost of the plant and gives accurate

cy in collection of materials and operates 24 hours a day.

More MRFs mean efficient waste sorting, more raw material for increased recycling/waste to energy extraction together with large amounts of CO2 Eq. emission reduction, reduced dumping, reduced open burning of waste and improved air quality and inclusion of waste pickers. With the MRF, it take care of the health and sanitation of the most vulnerable class – the scavengers of the society and work for a zero waste to landfill nation through efficient solid waste recycling. In that respect, MRF adds to sustainable economic growth of the nation all its dimensions.

While Nepra continues to serve the society for its waste management needs and a clean, green, healthy tomorrow, it also aligns its business objectives to the SDGs by uplifting vulnerable groups, empowering women and addressing climate crisis. It is contributing in several ways to few of the SDGs and plans to keep innovating to address all the 5 Ps – People, Planet, Prosperity, Peace and Partnership with periodical reviews and smart, sustainable approaches.



●  
*Nepra's alignment with the SDGs and 3 Ps of Sustainable Development – People, Planet and Prosperity*



## SOLUTION FOR YOUR LIFTING NEEDS



Liquid Metal Handling Crane



Billet Handling Crane  
(Rotating Trolley Type)



Billet Handling Crane  
(Rotating Beam Type)



**SAAHIL GHAVRI** CEO

📍 16, Sec 7A, Gobindgarh - 147301 Punjab (India)

☎ +91-98887-11775 📞 +91-1765-502604 📠 +91-1765-506602

✉ imtcranes@gmail.com | sales@imt.co.in

★ EXCERPTS ★

## COPPER RECYCLING

# FOR A LEVEL PLAYING FIELD



AT THE RECENTLY HELD 24TH INTERNATIONAL CONFERENCE ON NON-FERROUS METAL 2020, **SANJAY MEHTA**, PRESIDENT OF MATERIAL RECYCLING ASSOCIATION MADE AN IMPASSIONED APPEAL TO PRIMARY PRODUCERS FOR COOPERATION AND NEVER TO MISGUIDE THE GOVERNMENT ON ISSUES RELATED TO TRADE.

### EXCERPTS FROM THE SPEECH

**C**opper is a vital base metal and critical input for power, infrastructure, railway, defence, automotive and almost all core industrial sectors. It is the basic raw material used in the manufacturing of all types of electrical and electronic equipment, mainly in SME sector.

India is dependent on imports in various forms to meet its copper requirement. The primary products viz cathodes is being manufactured in India mainly from imported copper ore and concentrates (mostly from

FTA routes) as India does not have sufficient mining reserves.

At the same time, India's secondary copper manufacturers are also fully relying on copper scrap which is a key raw material from outside India. It accounts more than 60 per cent of the total production in India.

The Indian secondary copper manufacturing units use various grades of copper scrap along with the primary copper as a raw materials depending on the end use application and in line with the global manufacturing practices.

Due to the lack of availability of the sufficient quantity of good quality domestic

scrap, the users/recyclers in India are importing the good quality scrap from overseas countries.

Looking at India's focus on electric vehicle, it is important to have robust domestic manufacturing hub for copper value added products, (that is Semis) in India across entire value chain.

The value of copper industry is around Rs 40,000 crore annually.

To support domestic manufacturing of copper and alloy products, Government should facilitate availability of input in the form of ores & concentrates, copper scrap (only quality grades covered under ISRI



**To support domestic manufacturing of copper and alloy products, Govt should facilitate availability of input in the form of ores & concentrates, copper scrap (only quality grades covered under ISRI specification).**



specification).

We suggest that the imports of semi-finished and finished goods like copper and copper alloy foils, sheets, strips, wires, tubes, pipes etc should be discouraged and allow copper scrap, alloys of semi-finished/finished goods which are not available in India.

We suggest that the Government should not restrict import of copper scrap rather it should encourage recycling of good quality copper scrap in the country. Since there is no FTA benefit on copper scrap and there are no imports from China there is no need to impose any restriction on copper scrap whatsoever, which otherwise, may turn counter-productive for the domestic industry.

The custom duty on Copper Scrap should be reduced from existing 5% to bring the same at par with global levels. In the major copper producing nations, Custom duty on copper scrap is in the range of 0-2%.

From the available import data from the Ministry of Commerce, it is evident that there is no import of copper scrap from China and/or any FTA country, thus, there is no need for any restriction on import of copper scrap.

Import of copper cathodes have increased manifold, especially from Japan in the last two-three years at Preferential Duty (this year at 0.5%). However, its major import is by the primary producers only.

The same quality cathode (HS Code 740311) can be imported from other countries like Australia, Indonesia, Myanmar, Chile, Zambia, Peru, South Africa, Philippines, Mongolia etc. at much lower Premium, however duty incidence of 5.5% makes them unviable.

Major beneficiaries of this proposed duty reduction will be not only the copper semis industry but also end users like automobiles, railways, defense, electrical equipment industry and ultimately end consumer and the Government of India.

I have three steel manufacture units of TMT and Structural Steel as well as a small aluminium alloy ingot producing unit, and a copper tube manufacturing unit all of which manufacture using the scrap route. Similarly, there are more

**OUR FRIENDS PRIMARY PRODUCERS ALWAYS LOBBY SO HARD AND SPREAD RUMORS AGAINST US AND TRY TO BLOCK OUR GROWTH EVERY NOW AND THEN. EVERY BUSINESSMAN IN THIS COUNTRY WISH TO DO BUSINESS PEACEFULLY WITHOUT ANY HURDLE.**

than 5000 units producing aluminium and copper through secondary route providing employment to several lakh labours and saving the environment. When you compare the profit margins / balance sheet of primary producer and that of us, you will see that we hardly make any profit due to the above challenges.

Our friends primary producers always lobby so hard and spread rumors against us and try to block our growth every now and then. Every businessman in this country wish to do business peacefully without any hurdle. Through this forum I would like to request all that we are not your competitors, materials which we produce are totally consumed by different set of industries. I request them not to restrict our raw materials or try to impose any further duty on our raw materials and do not misguide the Government authorities time and again.

Secondary producers are just surviving in these tough times and any additional burden will hurt us more. We as secondary metal association have never talked about Customs duty on their raw materials and expect the same co-operation from them.



*Secondary producers are just surviving in these tough times and any additional burden will hurt us more.*

## ★ EXCERPTS ★

### COPPER RECYCLING

# OVERVIEW OF INDIAN NON-FERROUS INDUSTRY



Indian non-ferrous metals industry has been growing at healthy pace in the past five years and it has provided the much-needed impetus to the domestic economy.

In the future too, we expect immense opportunities for the development of the industry in India given the inclination of strong economic growth of the country.

Intense impetus on the 'Make in India' and Atmanirbhar Bharat initiatives are going to give a boost to the manufacturing sector thereby benefitting the non-ferrous metal industry.

Similarly, we are also witnessing a healthy growth in the total metal recycling industry in the last five years.

However, there is an urgent need to develop a scrap recycling ecosystem with appropriate policy and legislations to promote organised scrap collection and segregation in India eventually to result in minimizing scrap import in India.

A well-developed non-ferrous metals industry is vital for any developing country as it provides important raw material to many industries which are the pillars of economic development.

As secondary non-ferrous metals

find widespread applications across the economy, the strong growth in GDP provides a tremendous opportunity for the development of the Indian non-ferrous metals industry in the future.

The non-ferrous metals industry in India is expected to show strong growth in the future. With a slew of reforms undertaken by the government, the end-use sectors of non-ferrous metals such as Automotive, Electricals, Packaging, Consumer durables, Railways, Ports and Inland waterways, Roadways and Renewable energy are expected to experience the strong growth trajectory.

Furthermore, these metals are witnessing increasing applications in the existing sectors as well as exploring many newer applications.

The growing emphasis on environment conservation and sustainable development has increased the focus on metals recycling.

With time, the share of recycling in the total metal production has increased significantly and is almost in parity with the global level.

The secondary production of metals through recycling requires significantly lower resources as compared to the re-

quirement for primary production and contributes significantly to meet the total demand of non-ferrous metals in India.

Looking at India's huge population which generates vast volumes of non-segregated scrap, of which a significant portion constitutes metals that can be reused.

However, the utilization of this unaccounted scrap is exceptionally low as the Indian metals recycling industry, including the scrap collection segment, is highly unorganised.

The absence of the metals scrap recycling ecosystem and any domestic legislation and laws that apply to the industry are major obstacles to the growth of the Indian metals scrap recycling sector.

As the supply side for metals scrap in India is not adequate to meet the demand, India imports a significant quantity of metals scrap.

Therefore, we would like to emphasize here that this sector relies heavily on imported metal scrap as a key raw material as we do not have sufficient generation of domestic metal scrap. Hence, the recyclers in India are importing the good quality scrap from overseas countries.

*(The 24th International conference on Non-Ferrous Metal 2020 was recently organised by Corporate Monitor in association with JNARDDC, MRAI and Aluminium Association of India)*





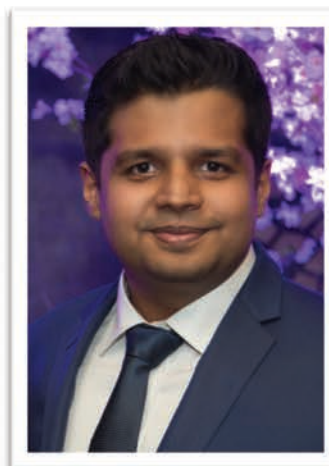
## INTRODUCTION



**VIJAY AGARWAL**  
+91 9987210101

We have been part of the non-ferrous industry since 1976 (44 years) and are working with all grades - primary, secondary scrap, concentrates, ores, residues, ashes, ingots as well as finished products. We work with all grades of scrap in the non-ferrous sector – Copper, Brass, Zinc, Aluminum, Lead, etc.

Due to our long association in the Industry, we have been able to establish a good market reach and an ear to the ground in regard to the developments, changes, buying patterns of the market. We have been part of the metal industry through manufacturing, importing and segregation, trading and brokering.



**HARI AGARWAL**  
+91 9320051168

**We have our presence in the following areas:**

- **India:** Brokering, Manufacturing and Trading Divisions
- **Nepal:** Manufacturing of Brass and Copper Utensils
- **Thailand:** Trading and Processing Division
- **UAE:** Brokering and Trading Division

***We can work with any model that fits your requirements – whether it is with logistics or payment terms, we are flexible.***

**The brokerage division is handled by Mr. Hari Agarwal, third generation in the business.**

We have a customer base throughout Europe, India, Malaysia, Thailand and China.

### **Material that we work with:**

Copper Scrap	Millberry, Berry Candy, Birch Cliff, etc.	Zinc Scrap	Die Cast, Score, Shredded Zinc, etc.
Aluminum Scrap	Taint Tabor, Extrusion, Wheels, Tense, etc.	Motors	Mixed Motors, Alternators, Starters, Ballasts, etc
Brass Scrap	Honey, Water Meters, Pales, Pallu, Label/Punching, High Copper alloys, etc.	Shredded Scrap	Zorba, Zurik, Mixed Heavies, etc.
Insulated Wires	Copper Cables (ICWs), Twang (IAW), URD Cables, Lead Copper Cables, etc.	Others	Aluminum Copper Radiators, Gas Kits, Electric Meters, ACSR, etc.
Stainless Steel	Shredded 304, Catalytic Converters, SS 316, SS 204, etc.	Dross	Copper Dross, Brass Dross, Zinc Dross, Skimming, Ash, etc.

### **Semi Finished Products:**

Material	Type	Alloys
Copper	Ingots, Billets, Sows, Copper Coils, Rods	99% minimum Cu, 99.80% minimum Cu
Brass	Ingots, Billets, Rods	Multiple Alloys – Customer specific
Copper Alloys	Ingots, Sows	Alu Bronze, Cupro-Nickel, Gun Metal – Customer specific
Aluminum	Ingots, Billets, Sows	Multiple Alloys – Customer Specific

## ★ STUDY ★

### E-WASTE



# COMPREHENSIVE IN DETAIL

BUREAU OF INTERNATIONAL RECYCLING'S STUDY ON EXISTING REPORTS ON THIS HUGE GROWING COMMODITY HAS THROWN INTERESTING ASPECTS THAT SHOULD HELP STAKEHOLDERS TO UNDERSTAND THE EMERGING SCENARIO BETTER AND HELP THEM MANAGE IT MORE EFFECTIVELY AND EFFICIENTLY. HERE ARE EXCERPTS FROM THE REPORT PERTAINING TO THE ASIA PACIFIC REGION

**G**lobal e-scrap volume is expected to grow to 53.9 Million Tonne (MT) in 2025 from 41.2 MT in 2016, registering an annual growth rate of around 3.0% and resulting in a more than 30% increase in less than a decade. Taking into account projected population growth, a 20% increase in the e-scrap generation per capita is expected in the same period, resulting in 6.7 kg/inh in 2025.

This is the highlight of an exhaustive study commissioned by Bureau of International Recycling (BIR) after reviewing all the studies available on the commodity till date. Numerous studies have been commissioned over the years to quantify the volume of EEE, UEEE and EoL-EEE generated within various geographic borders, as well as the volumes moving across borders. However, due to dif-

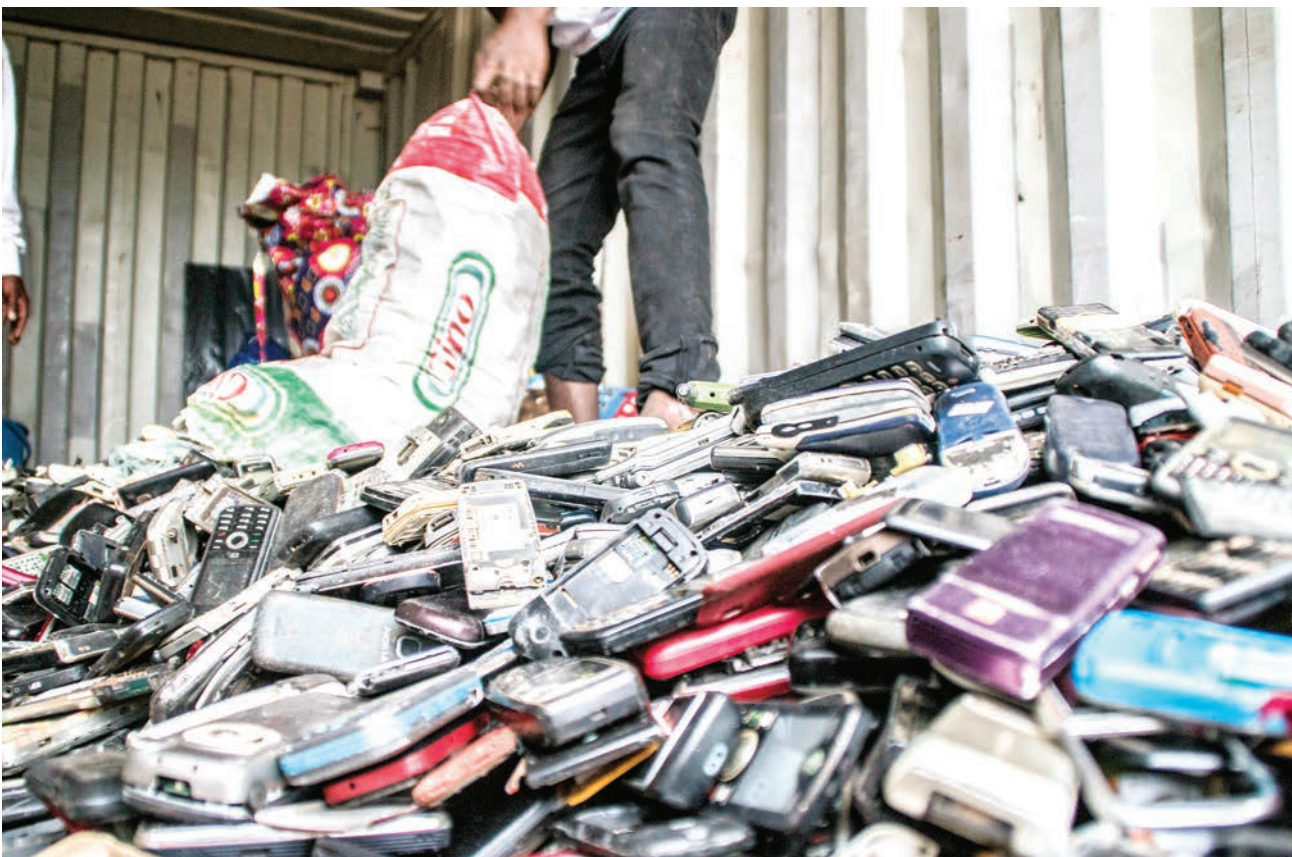
fering methodologies, assumptions and even definitions of the above-mentioned terms, it has been difficult to compare and, at times, rely on such data. It was in this context that BIR commissioned the review, with the goal of producing a definitive set of statistics on the generation and movement of e-scrap globally. This report presents the outcome of this study, along with projections of the generated quantities of e-scrap in the period 2016-2025.

In total more than 150 papers and technical reports were reviewed. Overall, the identified direct data cover almost 65% of the globe and amount to the generation of approximately 17,343 kt of e-scrap of various categories per year.

As is well known, the environmentally sound and economically viable management of Electrical and Electronic Equipment (EEE) is a critical element of a successful circular economy, with both Used (U) and End-of-



**Overall, the identified direct data cover almost 65% of the globe and amount to the generation of approximately 17,343 kt of e-scrap of various categories per year.**



Life (EoL) EEE moving within and between countries around the globe. Economic growth; rapid changes in technology; increased development of and access to Information and Communication Technology (ICT) networks; reduced costs of electrical and electronic appliances; the growth of the middle classes in developing countries demanding access to EEE; and planned obsolescence, have all resulted in rapidly increasing quantities of both Used and End-of-Life Electrical and Electronic Equipment generated worldwide.

Of the industry in the Asia-Pacific region, the report says that the collected data show that countries of the Asia-Pacific geographical region generate 4,905 kt of e-scrap per year. Taking into consideration that population coverage for the examined studies is 72.6%, and that not all e-scrap categories are recorded, the region might have taken over the pole position in the generation of e-scrap

worldwide.

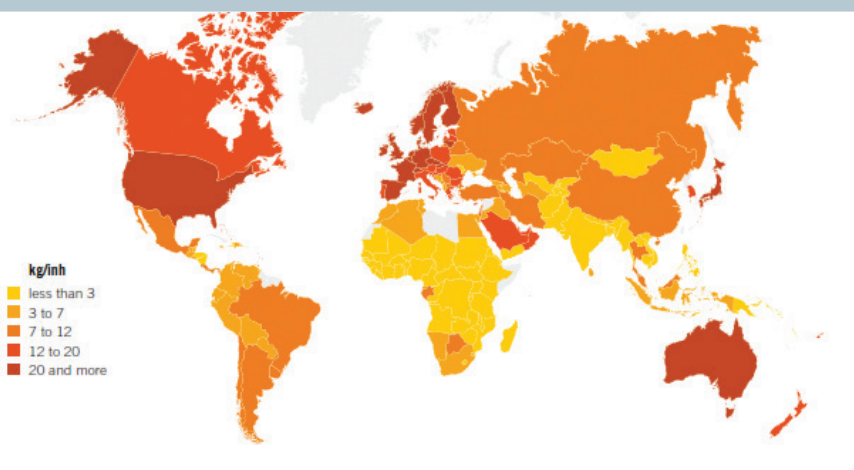
Regarding e-scrap generation per inhabitant per year, countries of the Asia-Pacific region are greatly diverse (0.2- 18.3 kg/inh), reflecting their differences in social, economic, cultural and infrastructural context. For instance, Japan is placed at the peak of this range, with a value of 18.3 kg/inh for the year 2014, corresponding to the generation of 2,318 kt of e-scrap. On the other hand, Vietnam is at the lowest recorded point with 0.2 kg/inh (2014), while Turkey is on 0.5 kg/inh (2012).

At this point it is worth mentioning that several of the countries with low to moderate values of e-scrap generation per inhabitant have high populations and therefore account for significant amounts of e-scrap in total. For instance, China has 1,291,485,000 people, leading to a value of 1.4 kg/inh, and generating 1,760 kt of e-scrap in 2003, while India with 0.3 kg/inh generated 383 kt in

*The report says that the collected data show that countries of the Asia-Pacific geographical region generate 4,905 kt of e-scrap per year.*

# ★ STUDY ★

## E-WASTE



» WORLDWIDE  
TOTAL E-SCRAP  
GENERATED IN 2025

*The annual  
growth rate  
between 2016  
and 2025 was  
estimated as  
3.03*

2007 (Table 4.2). According to Zeng et al. (2016) and Duan et al. (2016), China is ranked first in e-scrap generation, taking over from the USA.

### E-SCRAP GENERATION

In the Asia-Pacific geographical region, total e-scrap generation in 2016 was 15.9 MT, the highest of all regions.

The three Asia-Pacific countries with the highest e-scrap gener-

ation in absolute quantities were China (5.9 MT), Japan (2.6 MT), and India (1.5 MT). The Asia-Pacific countries with the highest e-scrap generation per inhabitant were Hong Kong (20.0 kg/inh), Singapore (18.1 kg/inh), and Brunei Darussalam (17.2 kg/inh). China has emerged as the second largest e-scrap generator in the world. In contrast, the per inhabitant generation of Afghanistan, Bangladesh, Myanmar, Timor Leste, Nepal, Yemen, Malawi and Mali is less than 1.0 kg/inh.

On average, Asia-Pacific countries generate 3.6 kg/inh of e-scrap (excluding imports) annually, but e-scrap generation grows annually by 4.5%. This is the fastest annual growth rate of all regions and it is estimated that the unit generation will reach 5.0 kg/inh in 2025. This represents an overwhelming increase of about 40%. Also, taking in account that this is the most populous region of the world, 23.7 MT e-scrap will be generated in 2025, about 45% of the world's total e-scrap arisings.

Importantly, India has emerged as fifth largest e-scrap generator in the world. This is noteworthy because, due to its population size and current low unit e-scrap arisings (1.16 kg/inh), the potential for a significant increase in e-scrap generation is high.

### TRANSBOUNDARY MOVEMENT OF E-SCRAP

Of all the aspects of e-scrap their transboundary movement has evoked the most concern and contradiction. E-scrap exports are complicated with many actors with different intentions exporting and importing for: direct reuse; repair and refurbishment prior to reuse; spare part harvesting; or for material recycling, with very different quantities being reported, often based on very gross estimations and farfetched assumptions.

A number of reports are based on gross estimates of (legally and illegally) exported quantities, using either flow analysis or extrapolated data from GPS tracking devices in a limited number of appliances collected for recycling. In some cases, it is reported that up to 80% of the Used and End-of-Life EEE in developed countries ends up being shipped (legally and illegally) to developing countries for reuse, recycling or dumping. The

issue and its wide publicity have given rise to significant concerns that in less developed countries the exported devices are recycled by an informal sector utilising rudimentary methods, posing adverse environmental and health implications and adding a disproportionate environmental burden to those countries.

However, recent studies indicate that the transboundary movement of used EEE from developed to less developed countries is not the only cause of the discarded EEE problem in the latter. Parameters such as the regional trajectories, illicit trade, and the type of the exported-imported equipment must be investigated. Studies indicate that many e-scrap flows take a regional and not a strictly "North-South" route.

A proxy that has been used in the literature is HS 2002 code 854810 (waste and scrap of primary batteries and elec-

trical accumulators), which, even if it can shine some light on the complexity of transboundary movements of waste that contain valuable materials, cannot lead to any reliable quantification of e-scrap.

The biggest challenge when reporting on the transboundary movement of e-scrap is the dearth of available, coherent and reliable quantified data. It is common knowledge that the absence of an internationally agreed methodology inevitably leads to incomparable and inaccurate figures. Coherent data provision is restricted by "limited mechanisms of data collection, undifferentiated trade codes, lack of consistent definitions [...], minimum regulatory oversight, and limited agreement on the definitions of end users". As already stated, international trade data do not differentiate between new and used EEE, there is no COMTRADE category related to Used and End-of-Life EEE or e-scrap<sup>13</sup>, and obviously illegal trade is not reported in trade data.





## SFC Global Commodity Pvt. Ltd.



➔ **Manufacturing**

➔ **Trading**

➔ **Indenting**



### SFC Global Commodity Pvt. Ltd.

75/2, Santej Vadsar Road, Santej,  
Ahmedabad-382721, INDIA. Tel :- +91-2764 286088/ 89/90  
E-mail : sfcindia@live.com, admin@sfcplindia.com  
Web. : www.sfcplindia.com  
Dr. Kishore Rajpurohit : +91-9825049854  
Varun Purohit : +91-9727701301



# ★ STUDY ★

## E-WASTE

### CONCLUSIONS

The total quantities of e-scrap arisings are on an upward trend across the globe with a very strong indication that this trend will continue unabated for some time due to the emergence of innovative technologies and more affordable electronics.

The trade in e-scrap has grown not only from the developed to developing countries but also within developing countries. China implemented extensive regulations during the period 2001-2008, including a prohibition on the importation of e-scrap, resulting in decreased amounts of e-scrap imports.

In addition, the rapid growth in purchasing of electronics goods in developing countries is expected to favour the domestic supply of e-scrap over imports from developing countries.

The United States of America and Canada together with the Western European countries had on average the highest per in-

	E-scrap (kt)			Annual growth rate (%)	Population (x1000)			E-scrap (kg/inh.)		
	2016	2020	2025		2016	2020	2025	2016	2020	2025
Africa	1,825	2,117	2,635	4.27	1,196,824	1,318,969	1,480,630	1.5	1.6	1.8
Asia-Pacific	15,914	18,913	23,709	4.53	4,402,260	4,563,162	4,736,314	3.6	4.1	5.0
Eastern Europe	2,841	3,074	3,400	2.02	292,471	289,796	284,929	9.7	10.6	11.9
Latin America & Caribbean	3,741	4,105	4,639	2.42	622,911	648,332	677,375	6.0	6.3	6.8
USA & Canada	7,877	8,519	9,246	1.80	360,405	371,145	384,150	21.9	23.0	24.1
Western Europe and Others (except USA and Canada)	8,990	9,518	10,249	1.47	445,867	449,410	452,630	20.2	21.2	22.6
<b>WORLD</b>	<b>41,186</b>	<b>46,246</b>	<b>53,878</b>	<b>3.03</b>	<b>7,320,739</b>	<b>7,640,814</b>	<b>8,016,029</b>	<b>5.6</b>	<b>6.1</b>	<b>6.7</b>

» GLOBAL QUANTITY OF E-SCRAP GENERATED AND ESTIMATED IN THE SIX GEOGRAPHICAL REGIONS

habitant generation of e-scrap, 21.9 and 20.2 kg/inh, respectively in 2016. However, the Asia and Pacific countries, with low to moderate per inhabitant generation (3.6 kg/inh), were the highest e-scrap generators in terms of absolute quantity (almost 40% of the world's e-scrap generation).

It appears, with the exception of the Eastern European countries, that the EEE market in the developed countries is, in all probability, saturated. Moreover, taking in account the population size and current low generation per inhabitant in the Asia-Pacific countries, one can conclude that the future increase of e-scrap would mainly be derived from these nations and to a lesser extent from Africa.



## ★ INTERVIEW ★

### NORBERT FRAUNHOLCZ

Director of Recycling Avenue BV, Netherlands



DIFFERENT FORMS OF CHEMICAL RECYCLING WILL BECOME AN INTEGRAL PART OF THE PLASTICS RECYCLING INFRASTRUCTURE, BELIEVES **NORBERT FRAUNHOLCZ**, A NETHERLAND-BASED CONSULTANT IN RECYCLING TECHNOLOGIES AND SUPPLY CHAIN MATTERS FOR PLASTIC WASTE

# ‘Making plastics truly circular is a huge challenge’

#### HOW DO YOU SEE THE PLASTICS RECYCLING INDUSTRY DEVELOPING AND GROWING IN THE NEXT THREE-TO-FIVE YEARS?

→ I expect that different forms of chemical recycling will become an integral part of the plastics recycling infrastructure. Closed-loop recycling will then be possible for a much broader range of plastic waste than it is the case at present. I also expect the implementation of more chemical steps in mechanical recycling, such as chemical wash with organic solvents to remove, e.g., glue and ink, or using solvents to enhance delamination of multilayer or composite materials.

#### WHAT CHALLENGES DO YOU CURRENTLY FACE IN THE INDUSTRY AND HOW DO YOU THINK THESE COULD BE RESOLVED IN THE FUTURE?

→ Making plastics truly circular is a huge challenge. The EU set the ambition to increase the share of recycled plastics from the current 6% to 24% in the total converter demand by 2030. This requires the amount and average quality of recycled plastics to increase steeply in the coming years. It is difficult to see how this can be achieved by conventional mechanical recycling alone.

#### RECENTLY, YOUR COMPANY HAS ASSESSED MECHANICAL AND DIFFERENT CHEMICAL RECYCLING

#### METHODS FOR THE RECYCLING OF SOFT PVC WASTE. COULD YOU SHARE SOME OF THE INSIGHTS YOU HAVE ON THE TOPIC?

→ We assessed mechanical and different chemical recycling methods for the recycling of soft PVC waste. The results indicate that the solvent-based method is the current best option for soft PVC from several viewpoints, such as compatibility to existing recycling infrastructure and commercial viability. However, commercial viability requires a different feedstock strategy than apparently followed in previous attempts.

#### LASTLY, IF YOU HAD TO BE ONE TYPE OF PLASTIC, WHAT WOULD YOU BE AND WHY?

→ I would choose to be PLA. The reason is that I believe that most types of conventional plastics are just ‘too synthetic’ for many mass applications, which causes increasing environmental and health problems. Examples are dissipative applications, such as clothes, paints and tyre rubber, as well as products with an elevated risk of ending up in the environment, such as certain types of one-way packaging. Especially for such applications, I expect that consumers will increasingly require the industry to turn either to natural materials or to plastics with a very low impact on health and environment.



» Director of Recycling Avenue BV, Netherlands, **Norbert Fraunholz** have been consulting companies and organizations on recycling technologies and supply chain matters for plastic waste for more than 15 years

Courtesy: AMI International, UK

## ★ BRIEFS ★

### SECTORS

# PULP AND PAPER MARKET TO REACH \$368.10 BILLION BY 2027

**T**he global pulp and paper market is expected to gain impetus from the increasing usage of e-commerce platforms by youngsters to purchase cosmetics, groceries, and food items. It is mainly occurring because of the increasing usage of smartphones and internet worldwide. According to Fortune Business Insights' a new report, "Pulp and Paper Market Size, Share & COVID-19 Impact Analysis, 2020-2027"

The report further mentions that this market size was USD 348.83 billion in 2019 and is projected to

reach USD 368.10 billion by 2027, exhibiting a CAGR of 0.8% during the forecast period.



The outbreak of the COVID-19 pandemic has brought the world economy to a risky stage. It has disrupted supply chains, caused shortages of beds in hospitals, and halted production of a wide range of industries.

"Until a vaccine is found, we don't know till how long this situation will persist. Our reports would help you in finding the right strategy to battle this pandemic," the report said.

It also added that rising shift of companies towards environmentally-friendly solutions

will spur growth.

Pulp and paper are considered to be the most recyclable and sustainable materials used in packaging across the globe. Nowadays, the environmental concerns are surging and this is further compelling the manufacturers to shift towards eco-friendlier paper packaging solutions. Thus, the prominent FMCG, cosmetics, and food companies are joining hands with paper and pulp manufacturers to develop novel paper packaging solutions.

Apart from that, the emergence of the Covid-19 pandemic has raised the demand for tissue papers, especially from hospitals. These factors would contribute to the pulp and paper market growth in the near future. However, as paper industries require huge amounts of wood, the rate of water crisis & deforestation is increasing day by day. It may hinder the growth of the market.

## EVIAN MAKES LABEL-LESS WATER BOTTLE FROM 100% RECYCLED PLASTIC

**W**ater brand Evian has rolled out its latest innovation that it has been in the making for the last two years.

The company has launched a new bottle design that is made from 100% recycled plastics and features an engraved logo and no plastic label.

The Evian brand is owned by Danone, a leading global food and beverage company with four major businesses: essential dairy and plant-based products, waters, early life nutrition and medical nutrition.

While the bottle itself is made from 100 per cent recycled plastic, the pink cap, in-



stead of the traditional light blue, is made from the same type of plastic used in other

Evian products.

According to Evian the cap uses plastics designed to help preserve the water quality and while it is not made from recycled materials it is recyclable.

The new product is part of the firm's move to reduce virgin plastic across its entire range. Its goal is to have all of its bottle made from 100 per cent recycled plastic by 2025 as part of becoming a 'fully circular' firm.

'It's now more important than ever for us to bring consumers our natural mineral water in the more sustainable way as we owe everything to nature,' Shweta Harit, Evian global brand VP, said.



## MIAMI-BASED COMPANY'S INNOVATIVE PAPER SOLUTION AIMS TO COMBAT PAPER PACKAGING WASTE

**J**&J Green Paper, an innovative paper products technology firm based out of Miami, has developed an inventive and cutting-edge solution to the critical issue of paper waste, more than half of which is produced for packaging.

J&J Green Paper's unique compound is organic, biodegradable, compostable and completely recyclable, meaning that discarded J&J Green Paper products could be thrown in consumers' gardens without any detrimental effects to the environment, in addition to saving water and trees that are wasted during the traditional recycling process.

"We have created unique, environmentally friendly pellets that produce water resistant coatings for paper and paper packaging

without the use of toxic oil-based products. Companies and consumers no longer have to sacrifice quality to promote the environment," said Raul Sanchez-Elia, president of J&J Green Paper.

In a step that will revolutionize the paper industry and contribute to a more sustainable future, J&J Green Paper licensed its proprietary sustainable paper product formula to Hong Kong-based CST Green Resources Limited (CST). As per the deal, CST plans to manufacture paper products using J&J's breakthrough technology in facilities in Indonesia, Malaysia and Singapore with plans for eventual distribution throughout the Association of Southeast Asian Nations (ASEAN) region.



## LITHIUM BATTERY WASTE TO FUEL RECYCLING INDUSTRY: REPORT

**A** recent report by market analyst IDTechEx estimates that 2020 will see 330 kt of Li-ion battery waste and, as such, forecasts a growth in the recycling market.

According to the study, most of the waste will derive from consumer electronics. However, it is the sheer volume of end-of-life electric vehicle batteries which will be problematic if not properly dealt with.

"For the lithium-cobalt-oxide batteries used in the vast majority of consumer devices, the intrinsic value is relatively high, and recycling can be profitable from recovering cobalt and copper alone. Indeed, old consumer electronics could be a significant source of cobalt in the short-medium term, though hoarding, collection and distribution challenges make this unlikely," the report reads.

"EV batteries on the other hand will be easier to track, collect and manage. However, the material value in an EV battery, on a \$/kg basis, is lower due to the smaller amounts of cobalt used per kWh – and manufacturers are aiming to further reduce cobalt content, and even reduce nickel content further down the line."

Despite the challenges, IDTechEx has



tracked numerous companies that are now developing and commercializing various recycling processes, and combinations thereof, to recover more material from Li-ion cells in order to capture as much value as possible.

"Ensuring proper end-of-life management, for example via recycling, and using recycled material can help reduce energy and material requirements throughout the manufacturing chain and could help present companies with a marketing advantage," the report reads.

In IDTechEx's view, the opportunities that recycling opens, particularly in the case of Europe and the United States are not to be dismissed, because these regions are actively seeking to develop a domestic supply of critical materials, including those present in Li-ion batteries.

## GOOD NEWS FOR NON-FERROUS METAL SECTOR

**T**he extension of deadline for electric vehicles (EV) components localisation by six months by the Government is expected to help the fledgling EV industry as the localisation plans of several companies were derailed due to the disruption from the pandemic. To get demand incentives under the Rs.10,000-crore second phase of the FAME scheme (Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles Scheme), companies must gradually increase the local sourcing of components for their EVs as stipulated in the phased manufacturing programme (PMP).

The department of heavy industries extended the deadline for the localisation of several components under its PMP for EVs from October 1 to April 1 next year, offering a breather to the industry. Compliance with the PMP is a condition for availing subsidies.

The scheme provides the incentive in the form of subsidies to manufacturers of electric vehicles and infrastructure providers of electric vehicles.

The FAME scheme is a part of the National Electric Mobility Plan. It encourages electric vehicles by providing subsidies is the main thrust of the scheme. It also covers electric and Hybrid technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles. The focus areas under the FAME also include technology development and demand creation.



## ★ BRIEFS ★

### SECTORS

#### DOMESTIC STEEL DEMAND RISING: MOTILAL OSWAL

**T**he domestic steel demand in India has recovered in the past three months and is back at the pre-COVID levels largely due to an increase in demand from automotive and white goods.

Though the demand for steel from construction segment still remains low, it is also likely to recover post the monsoons. At the same time, higher regional prices and tight domestic supply due to higher export bookings by domestic steel mills have resulted in an increase in prices of Indian hot rolled coil (HRC) steel (flat steel prices have

risen by 15% in the past two months and are above 9 per cent above pre-COVID levels i.e., March 2020).

As per a report by Motilal Oswal, with higher steel prices and lower coking coal prices, margins of primary steel producers in India remain strong and there are signs of domestic steel demand recovering gradually in the country.

The report also highlights that India's finished steel consumption is recovering gradually, after witnessing 85 per cent YoY (Year on Year) decline in April 2020. At the

same time domestic consumption has been improving gradually, supported by the unlocking of the economy post the lockdown in March and April.

The report also points out that domestic steel production has also been on the rise due to improved capacity utilization. The crude steel production has also been improving in line with domestic demand, following 64 per cent YoY decline to 3.1 metric tonne in April 2020. It improved by 5 per cent MoM to 8.5mt in August 2020 and was down just 4 per cent YoY, supported by higher exports.

#### GOVT INTERVENTIONS MAKE TIMELY PAYMENTS TO MSMEs

**T**o help the MSMEs in this long standing problem, Government of India has taken a series of measures recently. Union Finance Minister, as part of AtmaNirbhar Bharat package, had announced that Government entities should make such payments within 45 days.

The Ministry of MSME followed up this announcement and took up the matter with the Central Ministries and Central Public Sector Enterprises (CPSEs) and State Governments and here are some of the interventions:

To make the reporting easy, regular and seamless, a dedicated online reporting format has been made for reporting the monthly payments and monthly pendency. As reported, more than Rs. 6800 crores have been paid by the Ministries and CPSEs in the last three months alone. It is coming out that almost three fourth of the monthly dues have



been paid during the same month by most of the Central Ministries and CPSEs. The pending amounts are expected to be in the normal course of business and below 45 days;

Active follow up is being done with the State Governments for payment and regular reports. Similar online reporting system has been devised and put in place for the States'

reporting also;

Another intervention is that the Department of Expenditure has issued an OM to the effect that the buyer organization will have to pay penal interest of 1% per month for delayed payment beyond prescribed timeline till the date of such payment;

On request of Ministry of MSME, Finance Ministry has waived the charges for on-boarding the TReDS platforms. This platform has been designed for bill discounting of the MSMEs against such supplies where payments are awaited. It is to be noted that earlier MSMEs were supposed to pay on-boarding charge of Rs. 10,000/- to the concerned exchanges who are part of the TReDS mechanism. Government has now waived the on-boarding charges for the MSMEs till March, 2021. Most of the CPSEs and a number of private companies are already on-board the TReDS mechanism.



# INDENTING HOUSE FOR IMPORTED FERROUS/NON FERROUS SCRAP & WASTE PAPER



(HANDLING OVER 900,000 M.T PER ANNUM INTO THE INDIAN MARKET)

## Cellpap India Private Limited

302, Vishwa Nanak, ICT Link Road,  
Chakala, Andheri (East), Mumbai – 400 099 (India)  
Phone : 022-2838 1705 / 2838 1706 / 2838 1707  
Fax : 022-28356650  
E-mail : [metals@cellpap.net](mailto:metals@cellpap.net) Website : [www.cellpap.net](http://www.cellpap.net)

## ★ BRIEFS ★

### SECTORS

#### STEEL EXPORTS HELP STEEL MANUFACTURES DURING LOCKDOWN



**A**ccording to CRISIL, exports helped large and primary steel makers through the lockdown months, with 60-80 per cent of their total production between April and August finding its way to various destinations, with China leading.

India had turned net exporter of steel to China for the first time in several years, with 69 per cent of semi-finished steel and 28 per cent of finished steel heading there between April and August 2020.

At the same time the crude steel production had fallen to a lower 27 per cent on-year despite a massive 38 per cent fall in domestic demand from April to August 2020.

As per Brickwork Ratings, ever since the lockdown was lifted from July 2020 onwards, steel mills have increased steel prices by around 90 \$ per tonne in the past three months. A further price hike is possible as domestic prices are still cheaper by around 7-8 per cent, compared with imported steel prices.

The steel ministry has proposed incentives of around Rs 3,345 crore to boost the domestic production of various grades of steel that are largely imported to meet the local shortfall.

While few sectors, such as automotive and domestic appliances, are showing encouraging signs of demand revival, going forward, infrastructure, construction, and real estate is expected to play a crucial role in further driving demand.

#### INDIA IMPROVES ITS GLOBAL INNOVATION INDEX RANKINGS

India has climbed 4 spots and has been ranked 48th by the World Intellectual Property Organization in the Global Innovation Index 2020 rankings. In midst of the Covid-19 pandemic, it comes as an uplifting news for India, and is a testament of its robust R&D Ecosystem. India was at the 52nd position in 2019 and was ranked 81st in the year 2015. It is a remarkable achievement to be in a league of highly innovative developed nations all over the globe.

The consistent improvement in the global innovation index rankings is owing to the immense knowledge capital, the vibrant startup ecosystem, and the amazing work done by the public and private research organizations.

The NITI Aayog has been working tirelessly to ensure optimization of national efforts in this direction by bringing policy led innovation in different areas such as EVs, biotechnology, Nano technology, Space, alternative energy sources, etc. The India Innovation Index, which was released last year by the NITI Aayog, has been widely accepted as the major step in the direction of decentralization of innovation across all the states of India.

#### UAE EXTENDS BAN ON STEEL SCRAP EXPORTS

**U**AE, the largest single supplier of ferrous scrap to India, has announced the extension of the country's ban on exports of ferrous and paper waste, aiming to support local steelmakers amid the deteriorating market conditions.

UAE's Ministry of Economy issued a directive to suspend the export of raw materials, in particular steel scrap under the following HS codes 720410, 720421, 720429, 720430, 720441, 720449 and 720450, for another four months from September 17, 2020.

UAE had banned the export of all ferrous scrap products for four months from May 15. Products banned for export are listed under the HS codes 720450, 720449, 720430, 720429, and 720410, which encompass virtually all possible ferrous scrap export products, and 720421, which is stainless steel scrap.

In 2019, UAE was the largest single supplier of ferrous scrap to India, when it dispatched 1.15 million tonne to the country and accounted for 16.35% of all Indian ferrous scrap imports.

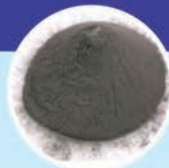


# Manufacturers and Exporters of Zinc Oxide

## OUR PRODUCTS



Zinc Oxide



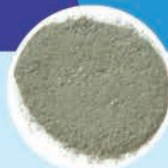
Refined Zinc Ash



Zinc Remelted Ingots



Zinc Dross



Zinc Ash



Zinc Skimmings

- Three manufacturing units in Haryana and Gujarat with the production capacity of 1500MT/month of all the products
- Manufacturers and Exporters of: Zinc Oxide, Refined Zinc Ash and Zinc Remelted Ingots.
- We regularly procure Zinc Dross, Zinc Ash and Zinc Skimmings.



Awarded Export Merit and  
Highest Domestic Sales Award  
for year 2017-18 by AIRIA



## Punia Group of Industries

Your Global Zinc Resource Since 1985

Corporate Office: Unit 3-17, Metropolis Mall,  
M. G. Road, Gurgaon 122 002. Haryana, India

+91 124 4219669, +91 7065596966

@ [info@punia.co.in](mailto:info@punia.co.in)

[www.punia.co.in](http://www.punia.co.in)

## ★ BRIEFS ★

### SECTORS

#### PAK STEEL INDUSTRY OPPOSES IMPORT TARIFF CUT

**P**akistan's steel industry has voiced its opposition to the government on reduction of tariff on imported finished or semi-finished steel products.

It has sent a proposal to the government to the effect and has emphasised that the move will destroy the industry and unleash a new wave of unemployment in the country. Pakistan Association of Large Steel Producers Secretary General Wajid Bukhari said "the import tariff reduction without providing a globally competitive business environment in Pakistan would surely spark de-industrialisation. Any reduction in tariff on

imported finished or semi-finished steel products under the garb of tariff rationalisation will result in de-industrialisation in the country followed by the closure of steel industry. It will also trigger massive unemployment across the country."

According to him, Pakistan ranked dismally low at 110th position on the Global Competitiveness Index of the World Economic Forum, which showed that the local business environment was not competitive compared to other countries. He said "All major steel-exporting countries fare much better than Pakistan in the competitiveness index. The

domestic steel industry had invested billions of rupees in recent years to add new capacity and introduce world-class technology in order to improve efficiency and competitiveness. However, the government also needs to play its part and work on the much-needed structural reforms to reduce the cost of doing business, enable fair competition, fix tariff anomalies and facilitate core industry issues before considering tariff rationalisation."

According to him, there was no evidence of any kind of export bias in the domestic steel industry and cut-throat competition existed while current margins were close to zero.

#### ALLIANCE TO END PLASTIC WASTE NAMES 11 FINALISTS FOR ASIA PACIFIC PROGRAMME

**T**he Alliance to End Plastic Waste, based in Singapore, and Plug and Play, based in California's Silicon Valley, have named 11 finalists for the Asia Pacific hub of the End Plastic Waste Innovation Platform, a 90-day accelerator program that supports startups with innovations to address plastic waste. The virtual Selection Day was organized from Singapore and is the alliance and Plug and Play's third selection hub, following programs in Silicon Valley and Paris.

The Asia Pacific program is designed to focus on three areas: collecting, managing and sorting plastic waste; recycling and processing technologies; and creating value from postrecycled plastics. The accelerator program will help selected startups seek funding from companies and investors, along with a range of global resources to address these focus areas, according to a news release issued by Plug and Play.

The 11 selected start-ups from Australia, India, Indonesia, Myanmar and the United Arab Emirates are:

- Agile Process Chemical LLP is a technology and machinery supplier for recycling end-of-life plastic waste.
- Banyan Nation is one of India's first vertically integrated plastic recycling companies.
- Bintix brings the data dimension into waste management,

where all household waste is recycled and doesn't end up in a landfill, and the value of waste increases ten-fold.

- BlockTéxx is a clean technology company that recovers polyester and cellulose from textiles and clothing.
- BluePhin Technologies is a robot that can collect floating waste in commercial water bodies.
- Ishitva Robotic Systems Pvt Ltd. designs and builds automated solutions using artificial intelligence, machine learning and IoT for sorting and segregation of plastics.
- Myanmar Recycles is a plastic film recycling facility specializing in post-consumer plastic that collects, sorts, washes and pelletizes plastic film into

resin for domestic and international sale.

- Plastics For Change has developed a marketplace platform that connects waste-pickers to global markets and ensures a consistent supply of high quality recycled plastic for brands.
- PolyCycl's patented technology chemically recycles plastics to petrochemical feedstock that has been approved for the manufacturing of new monomers and plastics.
- Re>Pal recycles mixed plastics from Indonesia into pallets.
- Rekosistem is an end-to-end zero waste management startup that aims for sustainable ecosystems via digital solutions and renewable energy.





EST. 2005



# SUNALCO

**BUYERS OF ALL GRADES OF  
ALUMINIUM SCRAP:**

**TENSE, TAIN-TABOR, TALK, TWITCH,  
ZORBA, ETC.**

**DEALERS OF METAL SCRAP:**

**BRASS, COPPER, COPPER CABLES, LEAD,  
ZINC, ZINC HEAVIES, ZURIK, ETC.**

**MANUFACTURERS OF SECONDARY  
ALUMINIUM INGOTS**

[www.sunalcoalloys.com](http://www.sunalcoalloys.com)

[enquiry@sunalcoalloys.com](mailto:enquiry@sunalcoalloys.com) // +91-22-40626464

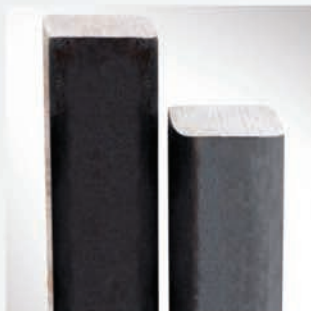




## An Exhaustive Range of Quality Stainless Steel Products



**40**  
Years  
of dedication



- Austenitic ■
- Ferritic ■
- Martensitic ■
- Duplex ■
- Precipitation Hardening Steel ■

# LAXCON

## An Integrated Stainless Steel Manufacturer

**Laxcon** has established itself as a name to reckon with in today's competitive market, thanks to its exceptional team, state-of-the-art facilities, and loyal customer base. Laxcon supplies the highest quality material to stockist and end-users worldwide.

Being an integrated manufacturer, Laxcon is best equipped to respond to unique customer requirements, promptly. With all processes, ranging from melting to finishing, under one roof, Laxcon is able to maintain stringent quality levels at every stage.

### Specialised Products

**Pump Shaft | Boat Shaft | Hydraulic & Pneumatic Shaft | Strain Hardened Bar | Highly Machinable Quality Bar**

**Our Manufacturing Range:** Square and Hexagonal Bright Bar, Equal Angle, Forged & Turned Round Bar, Flat Bar, Hot Rolled Hexagonal & Sharp Cornered Square Bar, Hot Rolled Round Corner Square ( RCS ), Hot Rolled Round Bar, Continuous Cast Billet / Bloom, Forging Quality Ingot.



A Gopal Group Enterprise

Email: [sales@gopalgroup.com](mailto:sales@gopalgroup.com) Phone: +91-11- 4295 2500 (100 Lines)  
Website: [www.gopalgroup.com](http://www.gopalgroup.com)

  
**GOPAL GROUP OF INDUSTRIES**  
THE "STAIN" LESS PEOPLE