Government to promote circular economy in steel to cut scrap imports

Growing collaboration between the government and the industry will see India, the epicentre of growth for steel, achieving greater heights in production and consumption of the metal, says steel minister Jyotiraditya Scindia in an interview with Kunal Bose and Rakhi Mazumdar. Mr Scindia is keen that India promotes scrap recycling and pursues green steel production to improve environment friendliness of steelmaking.

Do you agree with the statement that India already hosting the world's second-largest steel industry will see maximum capacity growth among all steelmaking countries? If so the reasons thereof?

A. India has now emerged as an epicentre for the evolution and growth of the Steel sector. Growing strength to strength in the last 9 years, our country is on course to achieve two landmark figures: production of crude steel at 126 million tonnes. and 13% growth in consumption levels.

In the last decade, crude steel production in India has steadily grown at 5% CAGR, Global Steel Experts led by the World Steel Association have predicted that India is going to be the epicentre of growth of the global steel industry during this decade; India's crude steel production has increased by over 5% whereas globally steel production declined by 4.3 % in the calendar year 2022; we have already emerged as the second largest steel producer in the world and our per capita steel consumption has gone up from 61kg to 87kg during the last nine years.

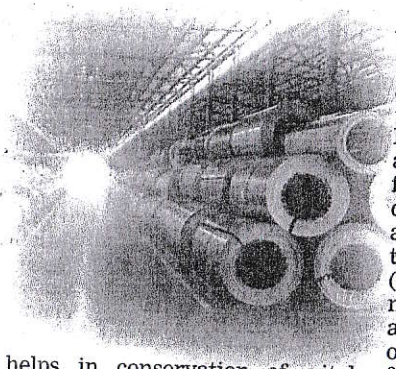
This proves our mandate to become a powerhouse of manufacturing and increase the share of Steel in GDP from 2 to 5%.

Reasons:

- Growing collaboration between the industry and the government, wherein the government plays the role of a facilitator and the industry drives the engine of growth. A successful example of the same is that we recently signed 57 MoUs' with 27 companies for specialty steel under the Production Linked Incentive (PLI) Scheme which is expected to generate an investment of about Rs. 30,000 Crores and additional capacity creation of about 25 Million Tonnes of specialty steel in the next 5 years.
- Adapting to new ideas, innovations, and new technologies to fast-track the steel sector.
- Strengthening the foundation of national infrastructure. The Steel Ministry is in the process of aligning our policies with the GatiShakti Master Plan which will complement the Rs. 100 lakh crore investment plan for infrastructure development over the next five years. This will boost the demand of steel in various sectors thereby enhancing steel usage.

Because of it's natural advantages - iron ore, chromite, manganese ore and coal availability in abundance - Odisha will see maximum capacity growth among all states. But will you agree that in a big country like India, capacity should be well disbursed particularly in the South and the West by way of recycling of scrap through EAFs. After all steel is infinitely recyclable. Your views.

A. Steel production using scrap as the primary raw material helps to conserve vital natural resources, among other advantages. If you look at Steel Scrap Recycling Policy it clearly states that using scrap as the main raw material as recycling of scrap



helps in conservation of vital natural resources besides other numerous benefits. The use of every ton of scrap shall save 1.1 ton of iron ore, 630 kg of coking coal and 55 kg of limestone. There shall be considerable saving in specific energy consumption also as the same will reduce from around 14 MJ/Kg in BF/BOF route to less than 11 MJ/ Kg in EAF/IF route, i.e. savings in energy by 16- 17%. It also reduces the water consumption and GHG emission by 40% and 58% respectively. Thus, the demand of steel scrap has increased considerably in the past globally from 367 mt in 2000 to 680 mt in 2021.

Even while large volumes of old steel remains embedded in end of life assets such as automobiles, falling structures and machinery, in the absence of an efficient procurement system to lead to quality scrap generation, the country was seen to be import dependent of up to 7 million tonnes of scrap. What will you recommend for India to become progressively self-reliant in ferrous scrap.

A. Vehicle Scrap Policy is already in place - As the name suggests under the new scrappage policy the old and unfit vehicles, creating pollution and harming the environment will be scrapped.

We also have the Steel Scrap Recycling Policy which promotes: a) circular economy; b) promote a formal and scientific collection, dismantling and processing activities for end of life products that are sources of recyclable (ferrous, non- ferrous and other non-metallic) scraps; c) Processing and recycling of products in an organized, safe and environment friendly manner.

It also aims at building a responsive ecosystem by involving all stakeholders and produce high quality ferrous scrap for quality steel production thus minimizing the dependency on imports. Further, Scrap based steel making technologies have been envisaged as one of the important options to reduce GHG emission intensity. The Policy is an important initiative of the steel sector to minimize Green House Gas (GHG) emissions and contribute in adopting the principle of 6Rs i.e. Reduce, Reuse, Recycle, Recover, Redesign and Remanufacture to avoid any adverse impact on the environment.

I think the industry needs to explore this sector further - we are already seeing results mushrooming - launched India's first Green Steel Brand - KALYANI FeRRESTA in December 2022, state governments are also looking at this closely, for example in MP's 2023 Budget the government has decided to implement the Vehicle Scrap Policy to replace government vehicles with electric vehicles (as much as possible). So, the policy work has already been done, now the industry needs to take the lead, collaborate with state government, informal sector, formal sector and devise a realistic plan to source scrap.

We are committed to become a net zero country by 2070. The work to reach that goal has to start in right earnest right now. What, according to you, should the steel industry be doing in this regard.

A. **Partly answered above.** Also scope to boost the Circular Economy in the sector as we are using approximately 25 Million ton scrap in the Steel sector that can be increased in the years to come. We are exploring ways to Reverse Logistics in the steel sector, to identify pathways of generation and recovery of scrap, both in the organised and unorganised sectors and formulate policies and structures to enhance the intensity of circularity in the country. There can be no better time for businesses to pledge to cut carbon emissions by 30–40% by 2030, when India is transitioning through Amrit Kaal.