

Report on the Seminar on the 22nd July 2022

Institute for Steel Development & Growth (INSDAG) organized a seminar in Kolkata on the July 22, 2022 on “**USE OF HIGH STRENGTH STEEL & SOLUTIONS FOR CONSTRUCTION**”. Many eminent professionals from Civil/Structural Engineering, and members of Steel fraternity participated in the programme. Mr Amitabha Ghoshal, the eminent structural Engineer, conducted the event. Mr D K Mohanty, Director (Commercial) RINL was the Chief Guest. The New Website of the Institute was also inaugurated. More than 70 number of invited delegates participated in the deliberations.

The Indian Steel ecosystem is in the stage of shifting to the use of HIGH STRENGTH STEEL IN ENGINEERING and CONSTRUCTION. This is also the trend worldwide. High Strength Steel is the steel which has much higher tensile carrying capacity whose yield strength more than 250 MPa. The exact definition is though not established but SERC Chennai defined it as any steel having yield strength (YS) in the range of 420-700 Mpa may be termed as High Strength Steel (HSS). Above 700 Mpa YS may be termed as Advanced HSS. For Rebars HSS may be termed for rebars in the range of 500-700 MPa YS.

Major takeaways from the Seminar :

1. Mr A Ghoshal spoke about sustainability in the context of Steel Production and Usage. One ton of Steel produces 1.85 t of CO₂. Hence it is important to make use of HS Steel in order to reduce the carbon footprints.
2. Dr N Bandyopadhyay spoke about the need of HS steel, particularly in the context of Bridge design. He gave examples of Bridges over Hooghly River – the old and the new one – to explain his points. In absence of use of HS Steel, such bridges could not have been designed. He further pointed out that the main considerations were Fatigue and Deflection.
3. Dr P Prabha of SERC, Chennai introduced HSS and discussed the main driving points in favour of HSS and highlighted the requirement of much more research in this field, to update BIS codes for designers.
4. Mr Dipak Basak of Dasturco pointed out that as the physical areas in Plants are limited and the requirements are to make maximum use of space, the use of HSS helps in creating more space by occupying less areas.
5. JSW's expressed their plan of stepwise inclusion in adoption of steel structures which is Integration with Education, Knowledge sharing forum, Awareness campaign, software based holistic evaluation tool.

JSW SEVERFIELD STRUCTURES LTD (JSSL), who had constructed many high-rises with steel, showcased their projects of Mumbai and of other places. They further highlighted the advantages they got by reduction in size of steel columns vis-à-vis RCC columns, reduced foundation size in case of steel columns, lesser labour, lesser accidents

6. Tata Steel showcased three products which they have launched and introduced the features, usage, advantages of the products. They were the high-grade Hollow sections, the LRPC and the welded mesh category.
7. AM/NS exhibited their products, especially plates for structural applications conforming to IS 2062 having YS E250 to E550. There is a need that the Steel producers understand well in advance the requirements of the Designers
8. SAIL highlighted their facilities and product range of HSS, highlighting availability of their rebars and NEX Parallel Flange Rolled Sections of higher grades.

The program was conducted by Mr Amitabha Ghoshal-an eminent and respected Structural Engineer.