
High tensile strands from TSSL

Tata SSL Limited (TSSL) was established in 1958 and it is the largest manufacturer of different types of wires. One of the major products is high tensile strands for prestressed concrete applications.

In 1972, TSSL became the first to make normal relaxation prestressed concrete strands in the country. Subsequently in 1994, the company repeated its pioneering efforts by becoming the first to manufacture low relaxation prestressed concrete strands in India. TSSL has put up a state-of-the-art manufacturing facility for the manufacture of high tensile strands. The technology and equipment has been imported from Redaelli Group, Italy. TSSL is thus the first to install and introduce this product successfully in the country.

Currently, TSSL manufactures approximately 22,000 t of high tensile strands annually.

Improved properties

The low relaxation properties of steel strand are achieved by a thermo-mechanical process during manufacturing. In this process, the PC strand is stressed to a pre-determined tension and heated to lock the dislocations. This results in substantial in-

crease in its resistance to creep, thereby inducing superior properties as under:

- Lower relaxation losses (2.5 per cent maximum after 1000 hours)
- higher yield point
- higher proof stress
- better performance at ambient and elevated temperature
- higher fatigue and corrosion resistance
- lower weight per unit length of strand.

Tata SSL Ltd has a very well-equipped laboratory, including equipment for testing relaxation losses. Continuous process control and technical upgradation has enabled TSSL to guarantee all the technical requirements. All the plants of TSSL are certified for ISO 9000 procedure since 1994.

International approval and exports

The low relaxation strands have been tested extensively by various overseas customers as well as laboratories and they are.

- (i) EMPA, Zurich
- (ii) Stagner, UK

Today, TSSL is in a position to offer "Low Relaxation Prestressed Concrete Strands" conforming to various national as well as international specifications like BS and ASTM standards.

Since 1994, when the production of Low Relaxation Prestressed Concrete Strands started, nearly 56,000 t has been exported to various overseas markets. The material has been exported to various countries like USA, Taiwan, Phillipines, Singapore, etc. The international clients include major construction companies like Freyssinet, Dywidag, Prescon, etc.

Tata SSL Ltd received the certificate of Export Excellence from Engineers Export Promotion Council in recognition of achieving highest export performance during the year 1997-98.

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