Prestressed Concrete Sleepers

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<tbody>
<tr>
<td><strong>Capacity:</strong></td>
<td>500 Pcs. per day</td>
</tr>
<tr>
<td><strong>Plant and machinery cost:</strong></td>
<td>1409.00 Lakh</td>
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<tr>
<td><strong>Working Capital:</strong></td>
<td>0.00 Lakh</td>
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<tr>
<td><strong>Rate of return (ROR):</strong></td>
<td>29.00 %</td>
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<tr>
<td><strong>Break Even Point (BEP):</strong></td>
<td>41.00 %</td>
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<tr>
<td><strong>TCI:</strong></td>
<td>0.00 Lakh</td>
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<tr>
<td><strong>Cost of Project:</strong></td>
<td>2691.00 Lakh</td>
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Concrete sleepers are one of the most important applications of a railway track system. The impact load characteristics and ultimate load carrying capacity of a prestressed sleeper, but the fatigue life of prestressed concrete sleepers is limited. The railway sleeper is a vital railway component that lies between the rail and the ballast. The important functions of sleepers include the following: uniform transfer and distribution of loads from the rail foot to ballast bed, provision of an anchorage for the fastening system, and the restraining of lateral, longitudinal, and vertical movement of the rails.

Prestressing is the process of applying a load to a structure deforming it so that it will withstand a work load more effectively or so that it will deflect less. Prestressed concrete is that in which internal stresses are introduced to such a magnitude and distribution that the tensile stresses resulting from the service loads are encountered to a desired degree. The prestresses are commonly introduced by tensioning the tensions. Indian railways is world’s largest railway network. Railways in India consume at about 350 Million concrete sleepers. The demand of such sleepers including Private players is expected to double to nearly 700 million sleepers in next 2 years. The Indian Railways is among the world’s largest rail networks. The Indian Railways network is spread over 115,000 km, with 12,617 passenger trains and 7,421 freight trains each day from 7,172 stations plying 23 million travelers and 3 million tones (MT) of freight daily. The revenue generated by the Railways is expected to grow at 10 per cent in the fiscal year 2017-18. Foreign Direct Investment (FDI) inflows into Railways related components from April 2000 to March 2017 were US$ 798.55 million. The market size is projected to grow from USD 104.03 Billion in 2017 to USD 138.96 Billion by 2022, at an estimated CAGR of 5.96%.

**Few Indian major players are as under:**

- Alpine Housing Devp. Corpn. Ltd.
- Bemco Sleepers Ltd.
- Calcutta Springs Ltd.
- Concrete Techno Project Ltd.
- Concrete Udyog Ltd.
- Daya Concretes Pvt. Ltd.
- Daya Engineering Works (Sleeper) Ltd.

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