

S4 Criteria for the Use of High Tensile Steel with Minimum Yield Stress of 315 N/mm², 355 N/mm² and 390 N/mm²

(1973)
(Rev.1
1974)
(Rev.2
Apr
2007)
(Rev.3
May
2010)
(Rev.4
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This UR does not apply to CSR Bulk Carriers and Oil Tankers.

The material factor k is defined as follows:

$$k = 0.78 \text{ for steel with } \forall R_{eH} = 315 \text{ N/mm}^2$$

$$k = 0.72 \text{ for steel with } \forall R_{eH} = 355 \text{ N/mm}^2$$

$$k \equiv \underline{0.66 \text{ for steel with } R_{eH} = 390 \text{ N/mm}^2 \text{ provided that a fatigue assessment of the structure is performed to verify compliance with the requirements of the Society.}}$$

$$k = 0.68 \text{ for steel with } \forall R_{eH} = 390 \text{ N/mm}^2 \text{ in other cases.}$$

Where:

R_{eH} : Minimum yield stress, in N/mm²

provided that the moment of inertia of the midship section is not less than:

$$I_{\min} = 3 W_{\min} L \text{ (cm}^4\text{)}$$

\forall = minimum yield stress

L = Rule length of ship (m)

W_{\min} = minimum mild steel section modulus (cm²) as given for a new ship in S7. Any reduction for corrosion control is not to be taken account of.

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