

# LiftHi 700

Revision:03

## CHARACTERISTICS

LiftHi 700 is a fully martensitic Q&T extra high strength structural steel. LiftHi 700 complies with S690QL, according to EN 10025-6, but offers closer overall tolerances, improved impact toughness and work shop performance. Due to the lean composition of LiftHi 700 the weldability stays extremely good along with cold forming capability.

## APPLICATIONS

The applications segments in which LiftHi 700 are most frequently found is within truck chassis, outriggers, various lifting and handling equipment.

## IMPACT TOUGHNESS

Min 70J/-40°C (-40 °F)

The impact toughness is given as absorbed energy at temperature being the average of three full size Charpy-V test samples in transverse direction to rolling, according to EN ISO 148-1 (\*)

## CHEMICAL COMPOSITION

Ladle analysis: The steel is grain refined and fully killed, wt%

Thickness (mm)	C max	Si max	Mn max	P max	S max	Cr max	Ni max	Mo max	B max	CEV Typical	CET Typical
4.0 - 25.0	0.16	0.60	1.50	0.025	0.010	0.50	0.10	0.40	0.004	0.42	0.28
25.1 - 50.0	0.18	0.60	1.50	0.025	0.010	0.60	0.10	0.60	0.004	0.48	0.32

$$CET = C + \frac{Mn + Mo}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40}$$

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

## DIMENSIONS

LiftHi 700 is supplied in the thickness range of 4.0 - 50.0 mm and in plate width of 900 - 3 100 mm. Supplied plate length from 4 000 to 18 000 mm.

## TENSILE PROPERTIES

Yield strength Rp0.2, min	Tensile strength Rm	Elongation A5, min
700 MPa	780-930 MPa	14%

Uniaxial tensile testing is performed in the transverse direction to rolling according to EN ISO 6892-1.



## ULTRASONIC TESTING

All plates delivered meets the Class E1, S1 requirement, according to EN 10160.

## DELIVERY CONDITION

LiftHi 700 is delivered as quenched and tempered (QT). (Q: according to EN 10025-6). The plates are delivered with sheared or thermally cut edges.

## TOLERANCES

The thickness tolerances of LiftHi 700 meets and exceeds the thickness tolerance of EN 10029 Class A (\*\*). Tolerances on shape, length and width meet the requirements of EN 10029. Flatness tolerances conforms to EN 10029 Class S, or closer. For more information, consult the Leong Jin catalogue: General Product Information.

## SURFACE CONDITION AND PROPERTIES

The delivered surface finish meets and exceeds that of EN 10163-2 Class A Subclass 3.

The plates will be delivered as painted, using a low zinc silicate corrosion protective shop primer. Plates can also be delivered as unpainted.

## HEAT TREATMENT

LiftHi 700 is not designed for applications requiring working or service temperatures above 550°C. If exceeding this temperature, the mechanical properties of the steel can no longer be guaranteed.

## PROCESSING PERFORMANCE

More information on the steel processing performance of LiftHi 700 can be found by consulting the LiftHi 700 Technical manuals on 1) Bending, 2) Welding, 3) Cutting and 4) Machining.

(\*) According to EN 10025-1, In plate thickness less than 12 mm, subsize Charpy test samples are used. The specified min value is then proportional to the cross section of the sample. Impact tests are not required for nominal thickness < 6 mm.

(\*\*) In the range of 4.0 – 12.0 mm the Leong Jin thickness tolerances can be offered.