Hot Rolled Structural HA300/1 steel

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Revision 5, November 2003
This literature supersedes all previous issues

GENERAL DESCRIPTION

HA300/1 - Hot-rolled Structural steel with a guaranteed minimum yield strength of 300 MPa, a guaranteed minimum tensile strength of 430 MPa, with good ductility. Suitable for the manufacture of thin walled pressure vessels.

TYPICAL USES

Small air receivers and LPG vessels.

AUSTRALIAN STANDARDS

AS/NZS 1594/2002 AS/NZS 1365/1996

GUARANTEED PROPERTIES OF STEEL BASE

| MECHANICAL PROPERTIES | GUARANTEED |
|--|--------------------|
| Longitudinal tensile Yield strength, MPa Tensile strength, MPa | 300 min 430 min |
| Elong on 80 mm, % ≤ 3.0 mm > 3.0 mm | 18 min 22 min |
| 180° transverse bend (L axis) ≤ 3.0 mm > 3.0 mm | 1t 2t |

| CHEMICAL PROPERTIES | GUARANTEED MAXIMUM % | TYPICAL % |
|---|---|---|
| Carbon (C) Silicon (Si) Manganese (Mn) Phosphorus (P) Sulphur (S) Aluminium (Al) Nitrogen (N) Titanium (Ti) Niobium (Nb) Niobium + Vanadium (Nb) (V) | 0.20 0.35 1.60 0.04 0.03 0.10 - 0.04 0.01 0.03 | 0.14 - 0.17 0.005 - 0.010 0.70 - 0.80 0.01 - 0.02 0.01 - 0.02 0.02 - 0.05 0.001 - 0.005 |

DIMENSIONAL CAPABILITIES

| Preferred Thickness, | | | | | | | | | Wio | ith Ra | nge, | mm | | | | | | | | |
|-------------------------|----|----|------|--|------|--|------|--|------|--------|------|----|------|--|------|--|------|--|------|--|
| mm | 90 | 00 | 1000 | | 1100 | | 1200 | | 1300 | | 1400 | | 1500 | | 1600 | | 1700 | | 1800 | |
| 13 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | |
| 4.5 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 3.5 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 2.5 | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 1.6 | | | | | | | | | | | | | | | | | | | | |
| 1.5 | | | | | | | | | | | | | | | | | | | | |

Note: Widths in the range 50 to 865mm are available by negotiation only.

| Key available black only | available pickled |
|--------------------------|-------------------|
|--------------------------|-------------------|

These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Steel Sales and Marketing confirmation.

NORMAL/OPTIONAL SUPPLY CONDITIONS

| | Normal | Optional [#] |
|-----------------|-------------|-----------------------|
| Surface finish | As-rolled | Pickled & Oiled |
| Tolerance class | | |
| Thickness | AT | - |
| Width | AW | ME |
| Length | - | - |
| Flatness | AF | - |
| Oiling | Not oiled | Oiled |
| Branding | Not branded | - |

Optional supply conditions may be subject to dimensional restrictions.

FABRICATING PERFORMANCE

| Method | Rating |
|-------------------------|--------|
| Bending | 3 |
| Drawing | 2* |
| Pressing | 2* |
| Roll-forming | 3 |
| Welding | 5 |
| Painting (Pretreatment) | 5 |
| Galvanizing | 5 |

* Surface scale adversely affects die performance of this product, pickled recommended.

where 1 = limited to 5 = excellent, or NR = not recommended

Note: It is recommended that customers use product promptly to avoid the possibility of rusting during storage. Oiling improves corrosion resistance but oiled product should be used within three months.

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Please ensure you have the current data sheet for this product as displayed at www.bluescopesteel.com.au

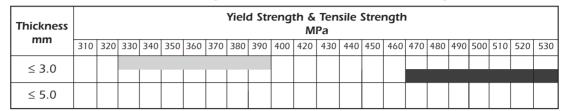
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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)





| Thickness | Total Elongation (%) | | | | | | | | | | | | | | | | | | | | | | |
|-----------|-------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| mm | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| ≤ 3.0 | | | | | | | | | | | | | | | | | | | | | | | |
| ≤ 5.0 | | | | | | | | | | | | | | | | | | | | | | | |

Note: Typical mechanical properties are based on aggregation of \bar{X} and 2SD performance.

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