

## Stainless steels

Brinsworth Hot Strip Mill is an established producer of many grades of hot rolled stainless steel, sourced locally, that can be tailor made to meet your requirements.

### Martensitic stainless steel

Martensitic stainless steels, high carbon-chromium, have been developed for a number of applications, after cold rolling, such as razor blades, surgical knives, scissors, cutlery, pressure diaphragms, valve components, bacon slicers and circlips.

Martensitic grades that are produced regularly at Brinsworth Hot Strip Mill are:-

	<b>C</b>	<b>Cr</b>	<b>Equivalent steel grades</b>
BSM876	0.62/ 0.68	12.5/ 13.1	X65Cr13
BSM879	0.68/ 0.70	12.7/ 13.5	
BSM877	0.35/ 0.41	13.1/ 13.9	
BSM278	0.35/ 0.41	15.5/ 16.5	1.4122, 35CrMo17
BSM275	0.18/ 0.22	12.5/ 13.5	420L, 420S45 X20Cr13
BSM276	0.4/ 0.45	13.0/ 14.0	420H, Z40C13 X38Cr13
420L	0.2	13	420S45, 1,4021, Z20C13
420H	0.4	13	1.4031, Z40c13

The chemistry is carefully controlled to ensure that once the steel is annealed and descaled it can be readily processed e.g. hot formed/forged, cold rolled, stamped/blanked and finally heat-treated, ground and polished etc. Our high carbon razor grades can be hardened and tempered to approximately 700 Hv<sub>30</sub>.<sup>‡</sup>

<sup>‡</sup> depending upon austenitising temperature, tempering temperature and quenching medium.

Other special features of our martensitic grades include: -

- High carbon razor grades with low levels of sulphur for improved corrosion resistance (876 and 879L).
- Molybdenum additions for improved resistance to pitting corrosion (877 and 278).

### Conditions of supply

Black, mill edge (annealed, shotblast and pickled subject to enquiry).

### Size range

Width (mm) 200 – 400mm

Thickness (mm) 2.0 – 7.0mm

### Coil dimensions

Inside diameter 508mm

Outside diameter 1350mm max.

### Coil weight

up to 9.5kg/mm of strip width.

### Austenitic and ferritic stainless steel

Brinsworth Hot Strip Mill have extensive experience in the hot rolling of austenitic, high chrome & nickel, and ferritic grades, low carbon-chromium, for example: -

	<b>C</b>	<b>Cr</b>	<b>Ni</b>	<b>Equivalent steel grades</b>
BSM285	0.04/ 0.06	17.5/ 17.9	9.0/ 9.5	347S31
BSM273	0.04x	12.0/ 12.8	0.35x	403, 410, X6Cr13

Typical applications are chemical filters, sprockets, gas valves, pen nibs and washers

### Conditions of supply

Black, mill or sheared edge.

### Size range

#### *Mill edge*

Width (mm)                      *Thickness (mm)*  
200 – 500mm                      1.5 – 12.0mm

#### *Sheared edge*

Width (mm)                      Thickness (mm)  
26 – 488mm                      1.5 – 6.0mm  
Subject to vetting.

### Cut lengths

From 1m to 11m.

### Coil dimensions

Inside diameter 508mm.

Outside diameter 1350mm max.

### Coil weight

Up to 9.5kg/mm of strip width.

### Hirework rolling

Corus Narrow Strip can offer to hirework hot roll stainless steel, subject to technical vetting. If you have any hireworking requirements please contact the number below.

### Technical support

Brinsworth has a comprehensive technical support team, available to advise on the use of martensitic, austenitic and ferritic stainless to achieve maximum benefit.

Technical account managers provide specialist advice and help with day-to-day problem solving. Works based metallurgists and the full resources of Corus Research and Development Laboratories are available to assist with longer-term developments.

For further information, enquiries or any technical guidance on potential applications of martensitic, austenitic and ferritic stainless please contact the Commercial Department at the address below.

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