

# Vetchberry Steels

Experience, quality & customer satisfaction



**ThyssenKrupp Materials (UK)**  
Vetchberry Steels



**ThyssenKrupp**

# Contents

- About Vetchberry Steels.....3
- Stainless Steel - A History.....4
- What is Stainless Steel.....5
- Stainless Steel - The Benefits.....6
- Slitting.....7
- Polishing.....8
- Blanking.....9
- Traverse Winding.....10
- Tempered Strip Division.....11
- Tempered Rolled Stainless Steel.....12
- Grade 420 Martensitic.....13
- Grade AISI 201 Stainless Steel.....14
- Certificates and Memberships.....15
- ThyssenKrupp Materials Logistics.....16
- ThyssenKrupp Materials (UK).....17

# Vetchberry Steels

## Experience, quality & satisfaction

Vetchberry Steels is strategically located, superbly equipped and expertly staffed to provide the most comprehensive service in the UK and abroad for stainless steel flat rolled products.

### Witton Service Centre

Our Witton service centre of 100,000 sq. ft. houses an inventory of never less than 2,500 tonnes of prime hot rolled and cold rolled coil. Offering the facilities to slit, cut to length, traverse wind, blank, deburr and polish stainless steel coil.

Our wealth of experience and flair for what we do has been key to our success. With investment in processing equipment, efforts to maintain a motivated workforce and customer satisfaction, Vetchberry Steels has gained acclaim as a first class partner both at home and abroad,.

### ThyssenKrupp AG

In 1999 Vetchberry Steels was purchased by ThyssenKrupp AG with it's immediate parent undertaking ThyssenKrupp Materials (UK) Ltd. At Vetchberry the investment continues and we are wholly dedicated to ensuring continued customer satisfaction. Excelling in the provision of products and services to become the foremost supplier in quality stainless steel flat products.



# Stainless Steel

## A history

Stainless steel was invented by a Sheffield metallurgist called Harry Brearley who, on 20th August 1913 made his first cast of stainless steel. The four major types of stainless steel are; Austenitic, Ferritic, Austenitic-Ferritic (Duplex) and Martensitic.

### **Austenitic**

Austenitic is the most widely used type of stainless steel. It has a nickel and manganese content that makes the steel structure fully austenitic and gives it ductility, a large scale service temperature, nonmagnetic properties and good welding ability. The range of applications of austenitic stainless steel includes house wares, containers, industrial piping and vessels, architectural facades and constructional structures.

### **Ferritic**

Ferritic stainless steel has properties similar to mild steel but with the better corrosion resistance. The most common of these steels are 12% and 17% Chromium containing steels. With 12% used mostly in structural applications and 17% in house areas, boilers, washing machines and indoor architecture.

### **Austenitic-Ferritic**

Austenitic-ferritic stainless steel has both ferritic and austenitic lattice structure - hence their common name: duplex stainless steel. This steel has some nickel content for a partially austenitic lattice structure. The duplex structure delivers both strength and ductility. Duplex steels are mostly used in petrochemical, paper, pulp and shipbuilding industry.

### **Martensitic**

Martensitic stainless steel contains mostly 11 to 13% Chromium and is both strong and hard with moderate corrosion resistance. This steel is mostly used in turbine blades and in knives.

# What is Stainless Steel?

## An overview

Stainless steel is essentially a low carbon steel which contains chromium at 10.5% or more by weight. It is this addition of chromium that gives the steel its unique stainless, corrosion resisting properties.

### Chromium content

The chromium content of the steel allows the formation of a rough, adherent, invisible, corrosion-resisting chromium oxide film on the steel surface. If damaged mechanically or chemically, the film is self-healing, providing that oxygen, even in very small amounts is present. The corrosion resistance and other useful properties of the steel are enhanced by increased chromium content and the addition of other elements such as molybdenum, nickel and nitrogen.

### Stainless steel and the environment

Stainless steel needs less maintenance and its hygienic qualities mean that we do not have to use such harsh cleaners to get a clean surface. There is little or nothing to dispose of into the drain that could have an environmental impact.

Stainless steel products complete their service life. There is less concern about disposal since this material is 100% recyclable. In fact, over 50% of new stainless steel comes from old re-melted stainless steel scrap, thereby completing the full life cycle.



# Stainless Steel

## The benefits

### **Corrosion resistance**

Lower alloyed grades resist corrosion in atmospheric and pure water environments, while high alloyed grades can resist corrosion in most acids, alkaline solutions and chlorine bearing environments; properties which are utilised in process plants.

### **Fire and heat resistance**

Special high chromium and nickel-alloyed grades resist scaling and retain strength at high temperature.

### **Hygiene**

The easy cleaning ability of stainless makes it the first choice for strict hygiene conditions such as hospitals, abattoirs, kitchens and other food processing plants.

### **Aesthetic appearance**

The bright and easily maintained surface of stainless steel provides a modern and attractive appearance.

### **Magnetic and nonmagnetic**

Where one or both of these characteristics is important to the customer, stainless steel provides a suitable solution. On one hand ferritics are magnetic, whilst austenitics offer a nonmagnetic solution.

### **Strength-to-weight advantage**

The work-hardening property of austenitic grades result in significant strengthening of the material from cold-working alone and the high strength duplex grades allow reduced material thickness over conventional grades; therefore creating cost savings.

### **Ease of fabrication**

Modern steel making techniques mean that stainless steel can be cut, welded, formed, machined, press punched and fabricated as readily as traditional steels.

### **Impact resistance**

The austenitic microstructure of the 300 series provides high toughness; from elevated temperatures to far below freezing making these steels particularly suited to cryogenic applications.

### **Long term value**

When the total life cycle costs are considered, stainless is often the least expensive material option.

# Slitting

Slitting Facilities:	18 slitting lines
Gauge:	From 0.1mm up to 6.0mm
Width:	Max 1320mm on a thickness from 0.1mm to 3mm Max 400mm on a thickness from 3mm to 6mm



Vetchberry are one of the largest stainless steel stockholders in the UK and can offer the following grades on a regular basis in the above slitting range:

## Ferritic Grades

430 (1.4016), 444 (1.4521), 409 (1.4512), 441 (1.4509), 434 (1.4113)

## Martensitic Grades

420L (1.4021), 420H (1.4034), 420 (1.4028)

## Austenitic Grades

301 (1.4310), 201 (1.4372), 304/304L (1.4301/1.4307), 321 (1.4541), 316 (1.4401), 316L (1.4404), 316Ti (1.4571), 305 (1.4303)

## Heat Resistant Grades

304H (1.4948), 321H(1.4878), 309S (1.4833), 310S (1.4845)

## Special Edges

We can offer deburred and fully rounded edges on certain sizes.

## Coating

We can supply various poly-coating solutions for surface protection.

# Polishing

Polishing:	1 Abrasive Belt Polishing Line 1 Brush Polishing Line
Width/Finish:	240 grit up to max 900mm wide 320 grit up to max 625mm wide

Facilities to polish in a dust free environment

## Special Edges

We can offer deburred and fully rounded edges on certain sizes.

## Coating

We can supply various poly-coating and paper interleaving facilities.





# Blanking

Cut to Length Facilities:	7 blanking lines
Gauge:	From 0.4mm up to 6.0mm
Width:	Standard production up to 600mm, up to 1250mm on request.
Lengths:	65mm up to 6000mm

## Special Edges

We can offer deburred and fully rounded edges on certain sizes.

## Coating

We can supply various poly-coating solutions for surface protection.

## Printing

Available for identifying each blank with standard cast, grade and coil number, and custom printing such as customer part number.



# Traverse Winding

Vetchberry can supply traverse wound material from 0.6mm up to 3.00mm thick and 10mm to 60mm wide, in all grades of steel.

We have 4 traverse winding lines on site, with over 15 years experience in this type of processing. We would like to offer you the opportunity to benefit from this experience.

Traditional 'pancake' coils at narrow widths often have the disadvantage of restricted OD, i.e. short coil lengths. For continuous feed applications, e.g. presswork, there is a growing demand for longer running feedstock.

Why stop your production six times to load traditional 'pancake coils' when you could do it once with Traverse wound coils?

We can offer 2 inside coil diameters: 16" (406mm) or 20" (508mm).

We can offer deburred edges on certain sizes.



# Tempered Strip Division

Vetchberry have a dedicated team and facilities to produce top class temper rolled strip in various hardness ranges and specifications.

Vetchberry Steels have a separate division who specialise in producing cold rolled temper rolled stainless steel strip. We have been rolling steel since 1992, when the 4 high Robertson Rolling Mill was commissioned. The mill is capable of rolling a wide variety of gauges and tempers to suit the most demanding applications. A tension levelled product can also be offered where flatness is crucial.

## Production · Stock Range · Rolling Programme

Specifications:            304 (1.4301), 301 (1.4310),  
                                     321 (1.4541), 316/L (1.4401/1.4404),  
                                     430 (1.4016), 201 (1.4372)

Gauge Range:            0.20mm up to 3.0mm

Hardness Range:        1/4 hard - 1/2 hard - 3/4 hard - full hard

VPN Ranges:            TR 230 - TR 280 - TR 330 - TR 380

Also we can offer custom rolled to encompass your specific hardness ranges.

Material can be supplied in sheared slit edges, also deburred/dressed conditions.

Please contact our Tempered Division for more details.

# Tempered Rolled Stainless Steel

At Vetchberry Steels we are very experienced in temper rolled steel and stainless steel hard rolled products. Supplying all general custom markets including; springs, automotive and high-tensile applications.

## Grades

Stock grades: 301, 304, 316

Specials: 201, 321, 430

## In House Rolling

Gauge Range: 3.0mm maximum  
0.20mm minimum

## Slitting

Widths: 6.0mm to 610mm  
(depending on gauge range)

We stock a wide range of both in house temper rolled material and tension levelled steels sourced from world wide precision mills.

Vetchberry Steels have in house facilities to edge dress stainless steel coil, with user friendly edges; deburred, fully round, depending on width and gauge.

# Grade 420 Martensitic

Vetchberry Steels stock and process a variety of martensitic grades of stainless steel sheet and coil.

Grade 420 is part of the family of martensitic steels. The group includes hardenable grades used for cutlery, with tensile strengths of up to ca 1800 n.mm<sup>2</sup>. These steels combine good resistance to corrosion with high mechanical specification and with Vetchberry's material's excellent surface evenness, the steel strips, coil and sheet can be introduced directly to customer's production lines. All these advantages, coupled together with Vetchberry's experience and expertise mean a gain in productivity and metallurgical quality for customers.

Our product range is mainly in the hardened and tempered condition however we do have a range of soft annealed 420 stainless steel available.

## Stock Programme

Specifications:	Grade 420 low, medium and high carbon
German Werkstoff:	1.4021, 1.4028, 1.4034
French:	ma2, ma3, ma3h
Coil Gauges:	0.50mm, 0.80mm, 1.0mm, 1.2mm, 1.5mm, 1.6mm, 2.0mm
Sheet Gauges:	0.50mm, 0.70mm, 0.80mm, 1.0mm, 1.2mm, 1.5mm, 2.0mm, 2.50mm, 3.0mm

## Typical applications include:

- Fine cutlery
- Gardening and engineering tools
- Rulers and set squares
- Machine knives
- Surgical instruments
- Building tools
- Wear plates
- Automotive springs

# Grade AISI 201 Stainless Steel

At Vetchberry we take pride in developing special stainless steels for new and challenging markets. The lean nickel austenitic grade AISI 201 is one of these specials.

The 200 series was developed in the 1930's but only in recent years has the lean nickel based, high manganese stainless steel come into play. As a result reductions in alloy surcharges, particularly when nickel prices are jumping, can be expected.

Grade AISI 201 can offer superb mechanical characteristics and save customers money. The steel was developed so that almost half the expensive nickel content has been replaced by manganese; a cheaper alternative.

## Stock Programme

German Werkstoff: 1.4372 soft annealed 2B/BA finish

Wide coil & narrow coil

Gauges: 0.50mm, 0.70mm, 1.0mm, 1.2mm, 1.50mm,  
2.0mm

We have the facilities to re-roll this material in house on our 4 high rolling mill to different hard rolled tempers.

## Typical applications include:

- Re-rolling applications
- Springs
- Window spacers
- Hand tools
- Lighting fittings
- Banding clips
- Insulation clamps

# A name you can trust

## Certificates and memberships

We believe in offering quality as standard and are accredited with ISO 9001:2008 as well as BS OHSAS 18001:2007 (Health and Safety).

Backed by a world class supply chain, we enjoy close relationships with some of the World's most respected manufacturers. We source material globally to meet customers' specific requirements and are confident we can deliver a total solution, whatever your needs.

Vetchberry Steels is committed to developing guidelines and processes to ensure that they comply with the principles upheld by the AMMPL (The Association Materials Management, Purchasing and Logistics) code of conduct.



# ThyssenKrupp Materials Logistics

ThyssenKrupp Materials Logistics employs over 100 people in warehousing and transport across the UK. Operating 46 vehicles ranging from pick up trucks to articulated lorries.

ThyssenKrupp Materials Logistics carries out over 115,000 deliveries per year through 8 branches strategically positioned throughout the UK, with a central hub in the West Midlands, offering a cross docking service for next day delivery.

ThyssenKrupp Materials Logistics provides in house transport for Vetchberry Steels as well as all ThyssenKrupp Materials (UK) companies including; TGL, MSS, Metalfast, TSC and Alserco. Along with in house deliveries, TKM Logistics also deliver on behalf of Aerospace and other third party customers. The security of goods is ensured by tracking systems onboard all vehicles for both security and planning purposes.





# ThyssenKrupp Materials (UK)

We are able to offer customers the complete 'one stop shop' experience. Talk to us about your metals, plastics and LED requirements; by combining your purchases together we can save you time and optimise your supply chain.

**Round Bar**

Stainless Steel and Aluminium round bar available in various grades in over 150 different sizes.

**Square Bar**

Aluminium square bar available in various grades in over 50 sizes.

**Flat Bar**

Stainless Steel and Aluminium flat bar available in various grades in over 250 sizes.

**Tube & Pipe**

Stainless Steel and Aluminium tube and pipe available in various grades in over 200 sizes.

**Square Tube**

Stainless Steel and Aluminium square tube available in various grades in over 30 sizes.

**Rectangular Tube**

Stainless Steel and Aluminium rectangular tube available in various grades in over 30 sizes.

**Angle**

Stainless Steel and Aluminium angles available in various grades in over 100 sizes.

**Channel**

Aluminium channel available in various grades and over 50 sizes.

# ThyssenKrupp Materials (UK)

## Offering you more...

### **Bespoke Aluminium Extrusions**

We are able to offer special extrusions, bespoke to customer's drawings. Send us your drawings and let us see whether we can optimise your supply chain.

### **Stainless Steel & Aluminium Sheet**

Aluminium sheet available in various grades and sizes ranging from 2000 x 1000 to 4000 x 2000 and thicknesses from 0.5mm to 6mm.

Stainless Steel sheet available in various grades and sizes ranging from 2000 x 1000 to 4000 x 2000 and thicknesses from 0.5mm to 6mm.

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We also offer special finishes including:

- Dull polish
- Circle polish
- Bright annealed
- Mirror polished to order

Prefer something a bit more colourful?

Why not talk to us about anodising, painting or screen printing which we can offer via our approved out-workers.

### **Patterned Sheet**

Tread Plate and Stucco available ex-stock

Other patterns available on request

### **In-house Fabrication Facilities**

Our Alserco Division is your partner for first class aluminium fabrication. Services include CNC machining, cutting, punching, drilling, welding and finishing.

# ThyssenKrupp Materials (UK)

## Plastics and LEDs

Alongside our wide range of Stainless Steel and Aluminium products we are able to offer customers the complete 'one stop shop' experience. Talk to us about your Plastics and LED requirements today. By bundling your purchases together we can save you time and optimise your supply chain.

Forex® Foam PVC

Oroglas® Acrylic

Quinn™ XT Extruded Acrylic

Marlon FSX® and Marlon FS Hard® Polycarbonate

Vivak® PETG & Axpert® PET

SloanLED's®

**Contact our Plastics Team today for more details;  
Phone 0844 846 9573 · Fax 0844 846 9574**







Vetchberry Steels

Experience, quality & customer satisfaction.

Slitting · Cut to Length · Traverse Winding  
Blanking · Deburring · Polishing

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