Supporting presentation for lecturers of Architecture/Civil Engineering

Chapter 10

Forms and availability
Why « Forms and Availability » ?

- Delivery times and costs are major issues for architects & civil engineers
- While all stainless steel products start from a melting shop
  - There are many processing routes for stainless products
  - And stockholders, traders providing service packages
- And therefore Delivery times and Costs may vary widely
Some background information
How stainless steel is produced

- **Video**: Steelmaking and Hot Rolling of coils
- **Video**: Hot Rolling of coils
- **Video**: Cold rolling of coils
- **Video**: Steelmaking and hot rolling of bars
- **Video**: Wire rod rolling
- **Video**: Wire rod rolling
Stainless Steel Supply Chain

**Stainless Steel Mill**
- Ex-mill sales

**Distributors** (of which mill-owned)

**Products**
- Coils, Sheets, Plates
- Bars, Wire
- Reinforcing bar

**Service**
- Minimum weight 1 slab
- Production on order
- Lead time 2 – 3 weeks
- Lowest price /Kg
- Customized:
  - Cut to length
  - Cut to shape
  - Polishing ...

**Fabricators**
- Specific finishes (such as color)

**Stainless Steel Mill**
- Standard Component Manufacturing

**Distributors** (of which mill-owned)

**Products**
- Fasteners
- Tubes
- Valves
- Fittings

**Service**
- Available from stock
- Short delivery times (1-3 days)
- Price premium for service

**SIMPLIFIED**
Flat products

Ex-mill

Cold-rolled coil

Cold-rolled strip

Cold-Rolled polished sheet

Custom

Laser cut shape

Plates

I-beam from plate

Door & Window profiles

Clamps

Standard tubes

Profiled tubes

Tube fittings

Railings
Long Products

Ex-mill

Bars
Reinforcing Bar

Tie-bars

Cables

Threaded bars
Concrete Anchors

Fasteners

Wire Rod

Mesh

Mesh shower curtain

Custom

Handles

Sunbreaker
Future trends

The urgency of climate change mitigation and of a sustainable economy will drive major changes in the years to come.

A new product offer is likely to appear:

- re-conditioned products. Stainless steel from buildings/facilities being de-constructed could be re-processed and made available for a new service life without loss of properties.

- Higher strength and thinner products, able to offer the same service performance with less material use. The development of lean duplex grades and of cold-worked austenitic grades is already taking place.
References

Major stainless steel producers
http://www.worldstainless.org/about-issf/members
Thank you

Test your knowledge of stainless steel here:

https://www.surveymonkey.com/r/3BVK2X6