

# Sandvik Group – a global leader

Three business areas

## Sandvik Tooling



## Sandvik Mining and Construction



## Sandvik Materials Technology



**Invoicing**  
MSEK

23 893

35 182

17 703

**Employees**

15 278

15 455

9 058

31 Dec. 2010

Sandvik Materials Technology



# Product Areas of SMT

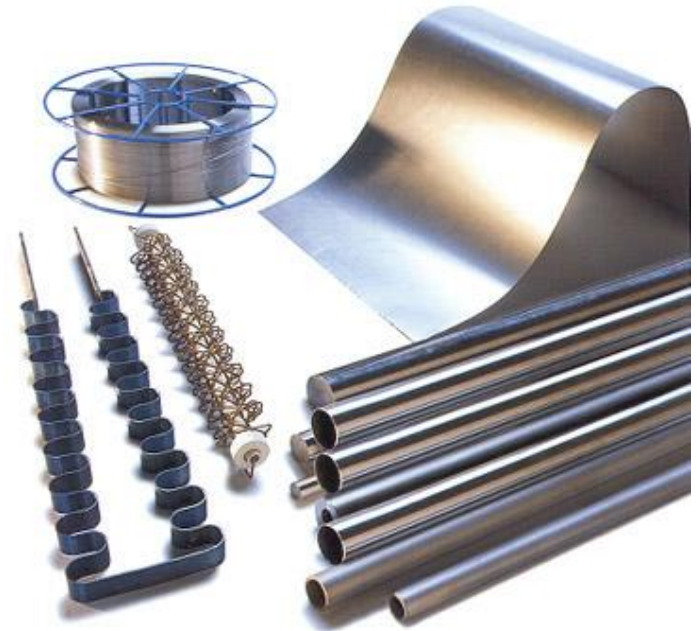
Tube

Strip

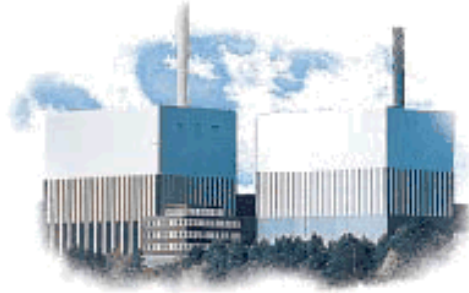
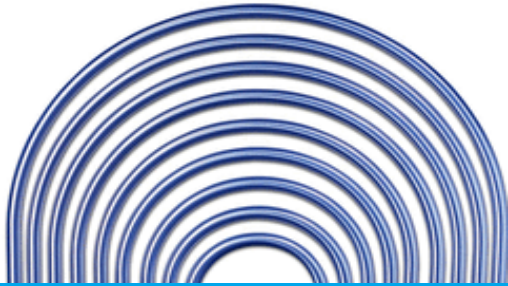
Wire and Heating Technology

Process Systems

MedTech



# Sandvik Nuclear Segment



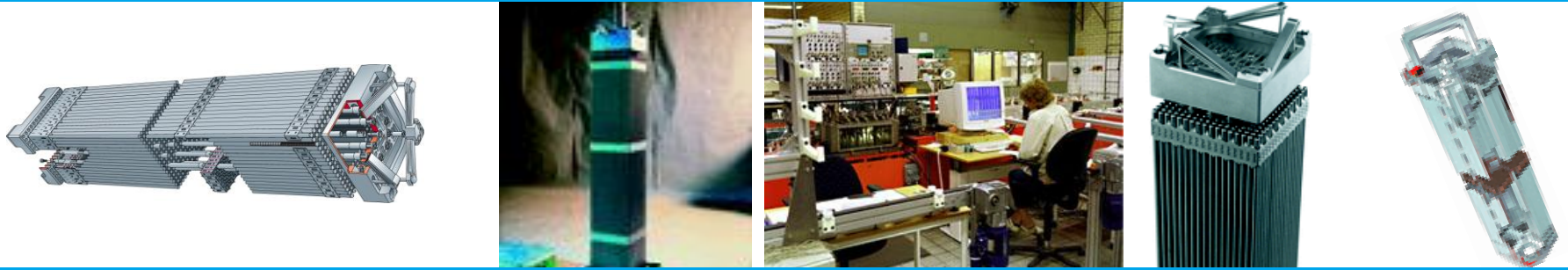
- **Sandvik Materials Technologies products:**
  - ✓ **Steam generator tubes**
  - ✓ **Fuel cladding tubes**
  - ✓ **Tube and pipe for nuclear power applications**
  - ✓ **Wire, strip and bar products for nuclear fuel components**
  - ✓ **Welding materials**

# Steam generator tubing



- **Production since 1968**
- **Materials:**
  - ✓ **Alloy 690 (30 Cr, 60 Ni, 10 Fe)**
  - ✓ **Alloy 800 (22 Cr, 32 Ni, 45 Fe)**

# Fuel cladding tubes



- Long and extensive experience from most fuel designs
  - ✓ BWR
  - ✓ PWR
  - ✓ VVER
  - ✓ AGR
  - ✓ LMFBR
  - ✓ CANDU
- Mainly zirconium base alloys, Zr2, Zr4, Zirlo

# Tube and pipe for nuclear



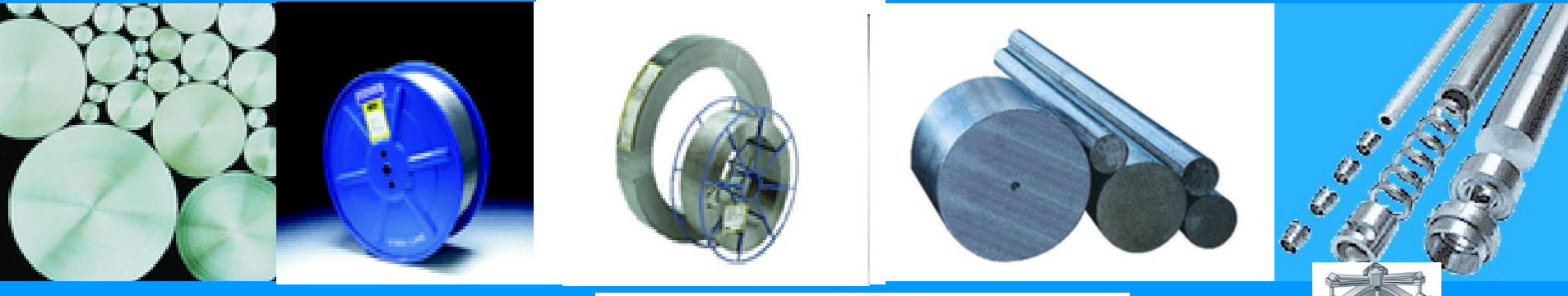
- Piping systems for primary, secondary and auxiliary equipment
- Control rod guide tubes
- Heat exchanger tubes
- Hydraulic and instrumentation systems
- Materials:
  - ✓ Austenitic stainless steel
  - ✓ Duplex steels
  - ✓ High-Alloy austenitic stainless steels and Ni-based alloys

# Welding materials

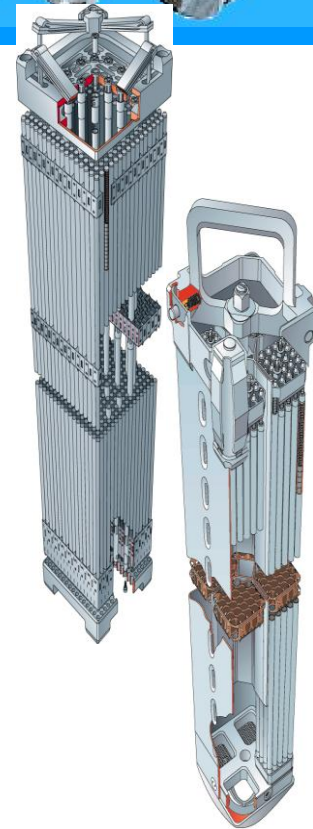
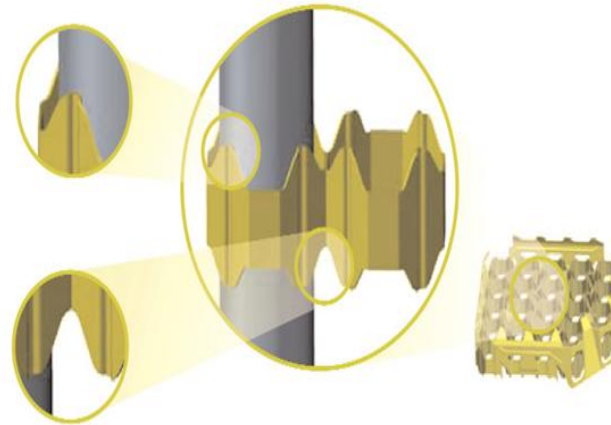


- **Type of grades : Stainless steel and Ni-base alloys**
- **Welding wires – MIG, TIG, SAW**
- **Covered electrodes**
- **Strip electrodes/Fluxes**

# Nuclear fuel components



- **Spacer strip**
  - ✓ Alloy X-750
  - ✓ Alloy-718
- **Spring wire**
  - ✓ Internal & External springs
- **Unique grades – Low Co bars**
  - ✓ 3R12, 3R60
- **Unique stainless bar**
  - ✓ Square shape





# Old fast reactor tubes

- **12R72 (15Cr15NiMoTi) cladding tubes**
- **2.3Cr1MoNiNb and 9Cr1Mo steam generator**
- **316L Na-Na heat exchanger**

Thank you for your attention