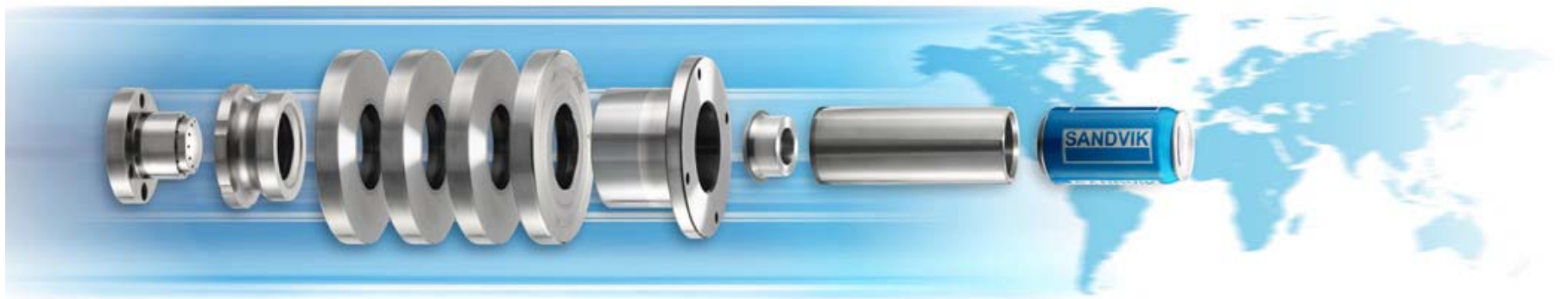
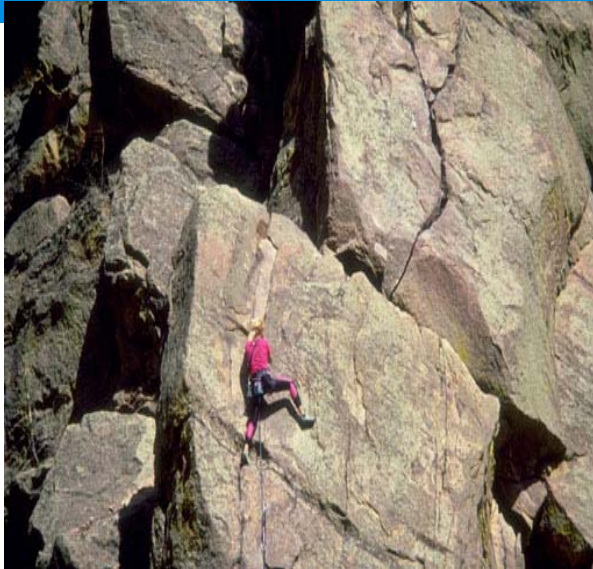


# Sandvik Hard Materials



**The Global  
Can Tooling Supplier**

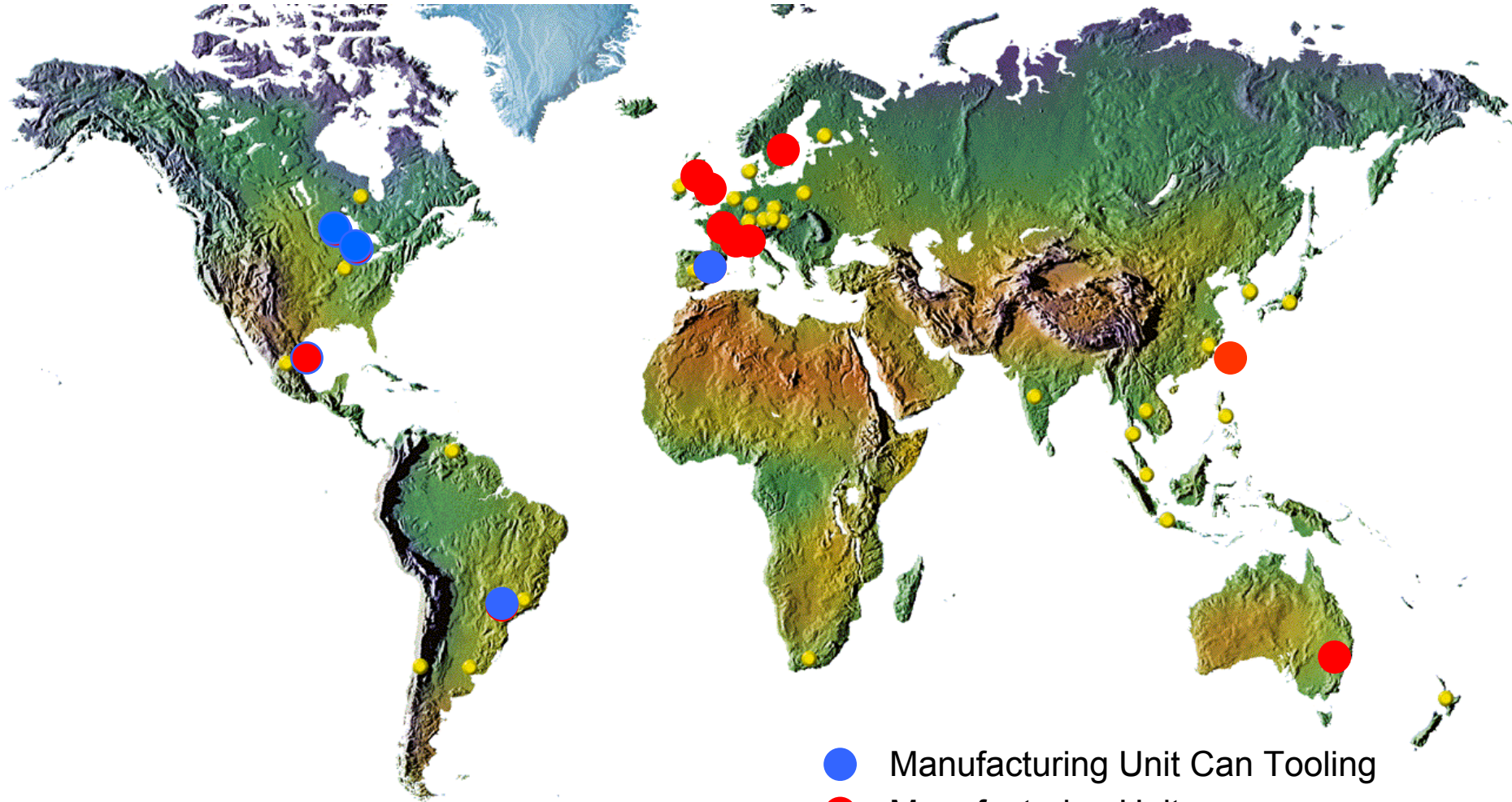
# Sandvik Hard Materials Can Tooling



Entered the Finished  
Can Tooling Market  
Globally in  
Late 90's from  
Barcelona (Spain)

- June 2002 - Acquisition of Valenite (USA)
- July 2004 - Acquisition of Alpen (Brazil)
- December 2004 - Acquisition of Technical Tooling, Inc. (USA)

# Sandvik Hard Materials Worldwide



- Manufacturing Unit Can Tooling
- Manufacturing Unit
- Sales Office

# Global Supply → Growth

## NO BOUNDARIES

### Caldes

#### Europe & Asia

Back up for Americas.

### Minneapolis / West Branch

#### Nafta

Back up for South America and Rest of the world.

### Sao Paulo (Alpen)

#### South America

Back up for Nafta and Rest of the world.

- A process is in the final stage to develop a set of best practices for can tool production.
- This will ensure product specifications and processes are identical .

# Integral Manufacturing



# Copper Tooling

- Blank and Draw Die
- Cut Edge Die
- Die Center
- Draw Pad



# Bodymaker Tooling

- Punches
- Ironing Die
- Redraw Die
- Dome Plug
- Redraw Sleeve
- Hold Down Ring
- Pilot Die
- Punch Nose



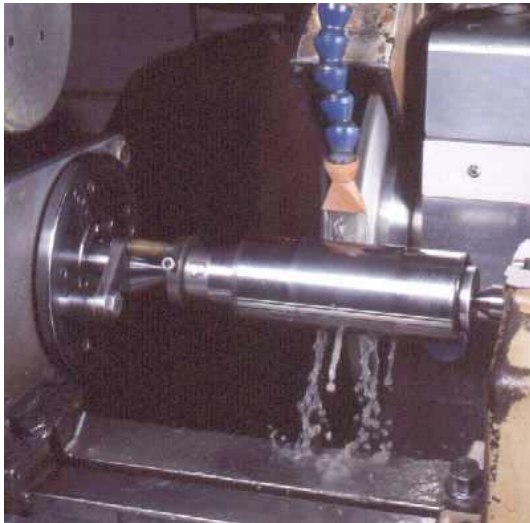
# Other 2 Piece Tooling

- Trimmer Chucks and Trim Knives
- Rams
- Necker Tooling
- Stripper Fingers
- Flanger Tooling



# Regrinding and Overhaul

- Ironing Dies (All Types)
- Redraw Dies
- Steel Punches
- Carbide Punches
- Pilot Dies
- Strippers
- Cupper Tooling
- Necker Tooling



# Other Tooling

- **Aerosol Tooling**
- **Crown Cap Tooling**
- **3 Piece Food Cans:**
  - ✓ **End Cutting Dies**
  - ✓ **Seaming Rolls**
  - ✓ **Slitter Knives**
  - ✓ **Forming Tools**



# Sandvik provides new developments to canmakers



# Copper Tooling Developments



**DZ20**



# Handling and storing good practices

- ✓ Clean the working surfaces of tooling after usage by removing rest of emulsion.
- ✓ Once working surface is clean and dry, grease the tool.
- ✓ Tooling must be always greased when stored.
- ✓ Tooling should never be left inside the machine if it is not working for long periods.
- ✓ Gloves should always be used when handling clean polished surfaces.



# Handling and storing good practices

- ✓ Tooling must always be properly packed when shipping it.



# Summary

- **Global Network Supply.**
- **Integral Manufacturing.**
- **New Grade Developments:**
  - ✓ **Copper ⇒ DZ20**
  - ✓ **Ironing Dies ⇒ DZ60**
  - ✓ **Punches ⇒ DZ10**
- **Good control of emulsion = longer tooling life.**
- **Carbide tooling must always be stored and handled properly protected against corrosion.**



# Sandvik Hard Materials



**The Global  
Can Tooling Supplier**