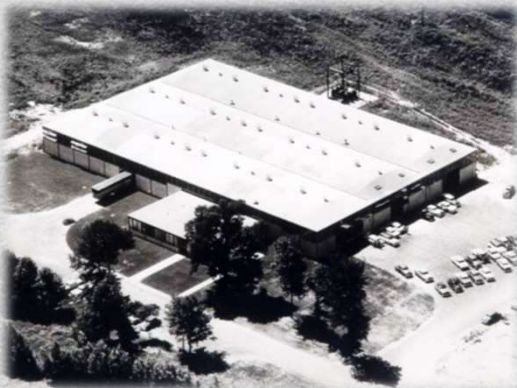


# WELCOME TO



## SMALL TUBE PRODUCTS

DUNCANSVILLE, PA U.S.A.



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***Skilled Producers of Copper and Brass Tubing  
Continuing the Excellence Established in 1947***





# Contents

- **Ownership**
- **STP's Role in the Supply Chain**
- **Statistics / Capabilities**
- **STP Core Competencies**
- **Served Markets**
- **Alloys and Tube Sizes**
- **Tooling**
- **Markets Served**
- **Packaging Forms**
- **Shapes / Fabrication Department**
- **Plant Layout**

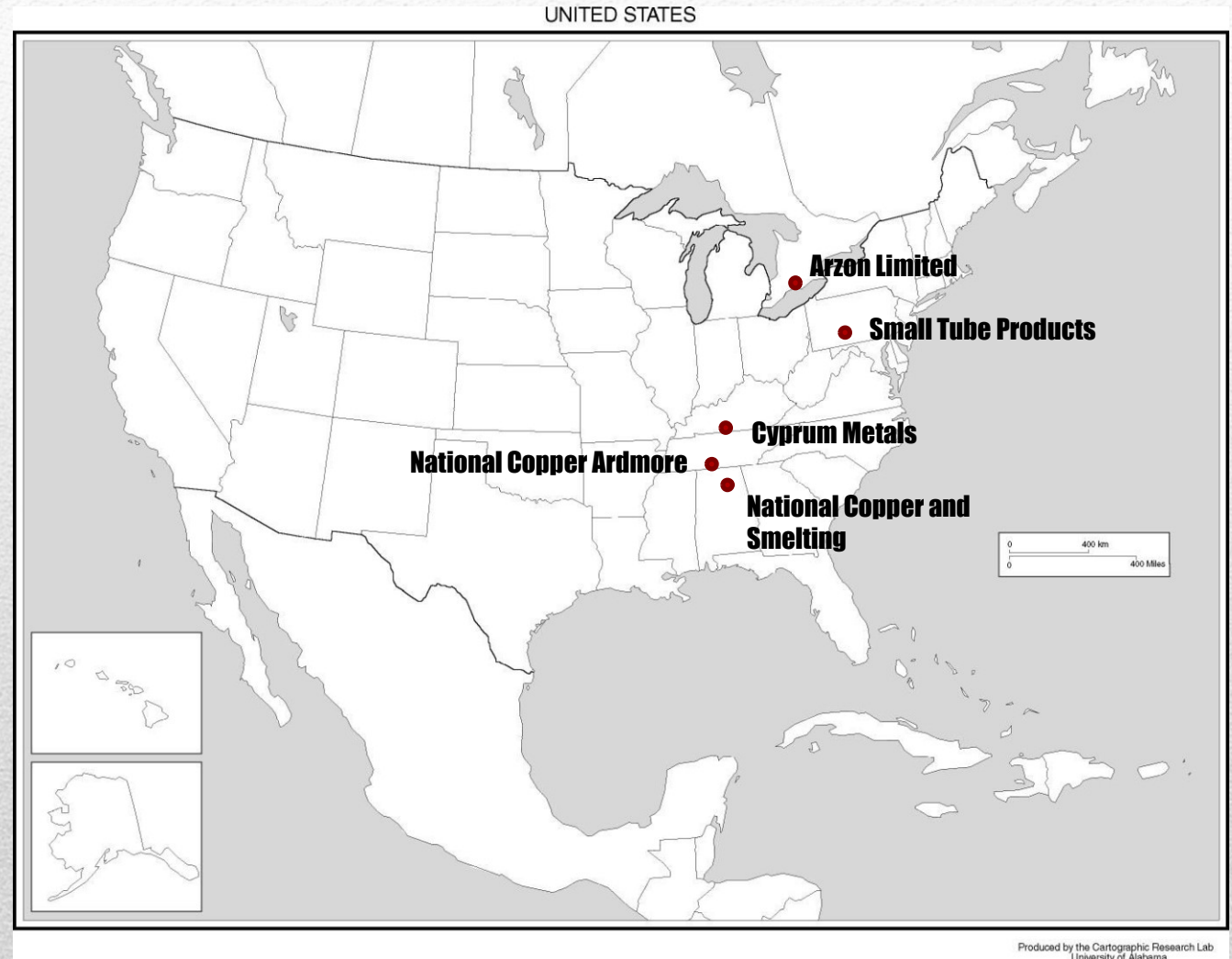




# Kothar Group

## Kothar Group consists of:

- **Arzon Limited**  
**Burlington, Ontario**
- **Cyprum Metals**  
**Franklin, KY**
- **National Copper & Smelting**  
**Huntsville, AL**
- **National Copper & Smelting**  
**Ardmore, TN**
- **Small Tube Products**  
**Duncansville, PA**

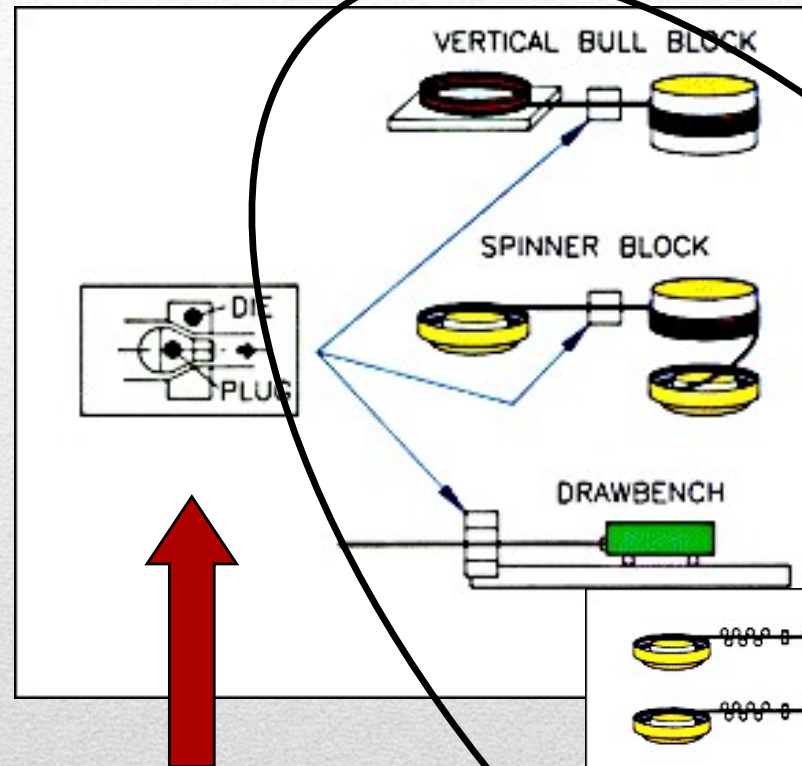
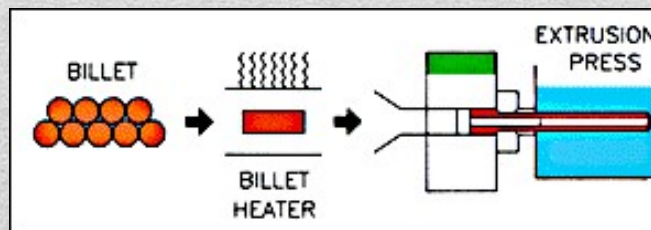
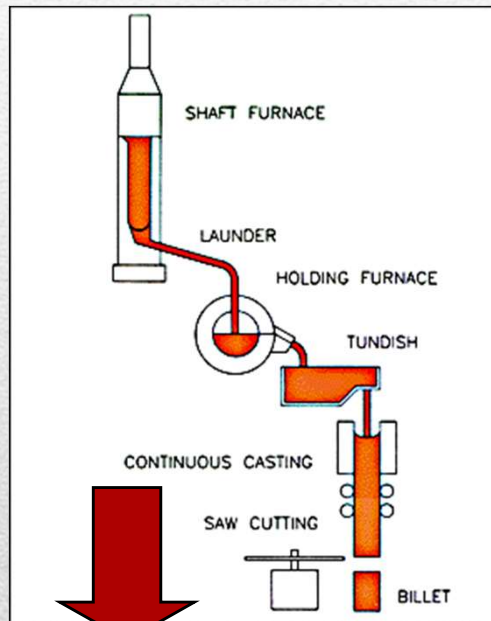




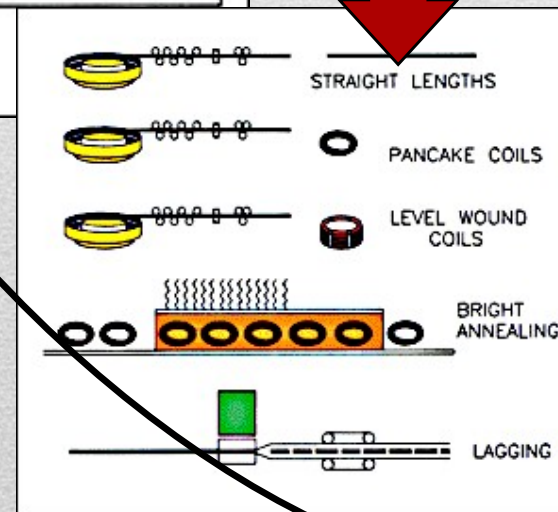


# STP's Role in the Supply Chain

## *Cast and Extrusion*



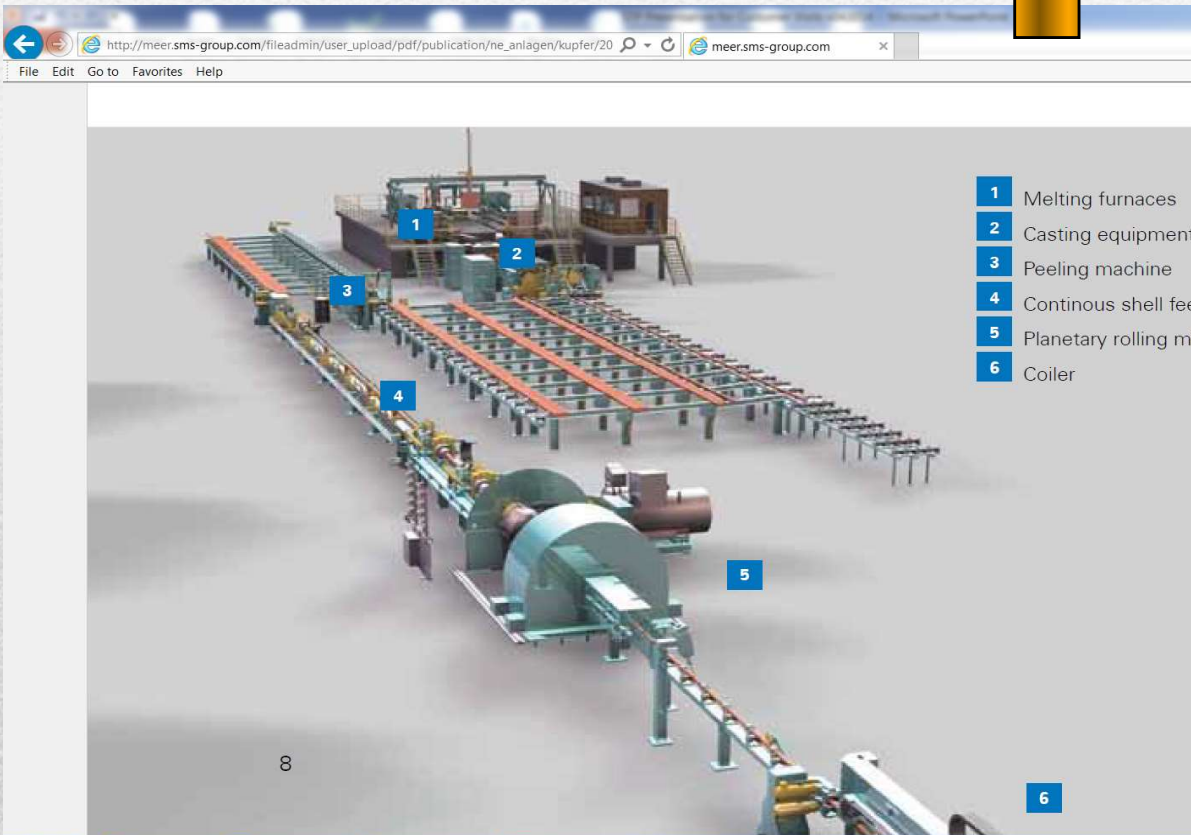
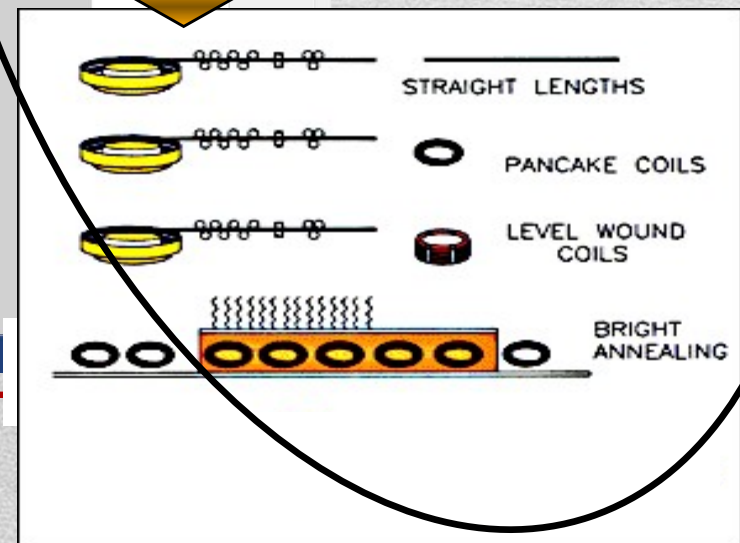
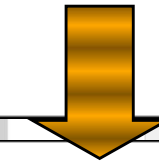
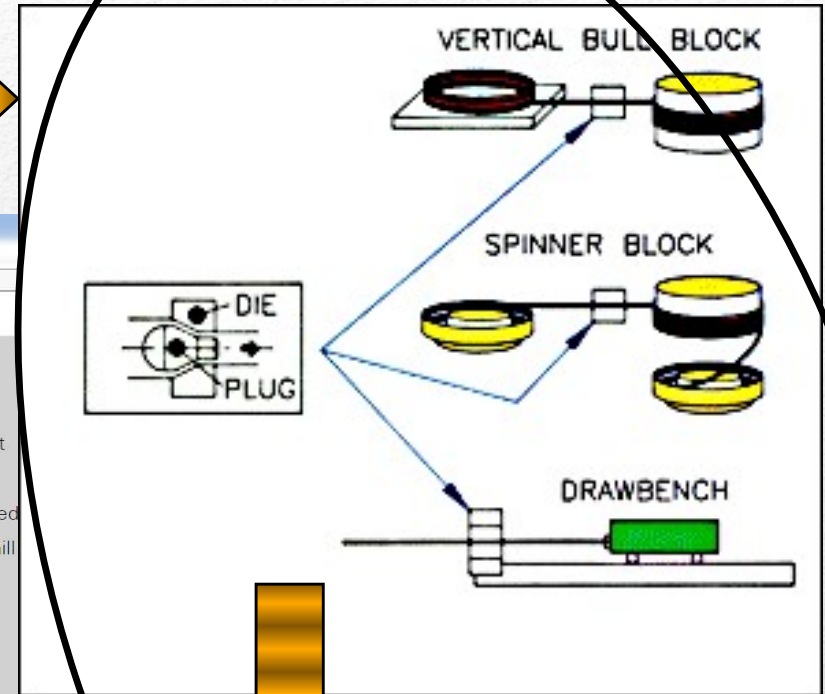
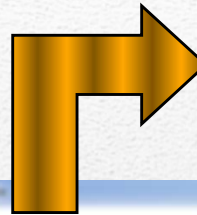
## *STP's Operations*





# STP's Role in the Supply Chain

## *Cast and Roll Technology*







# Our People



- **190 Employees**
- **Experienced workforce w/ 16 years avg. service**
- **Dedicated to craftsmanship**







# Plant Data / Capabilities

- **Plant Information:**

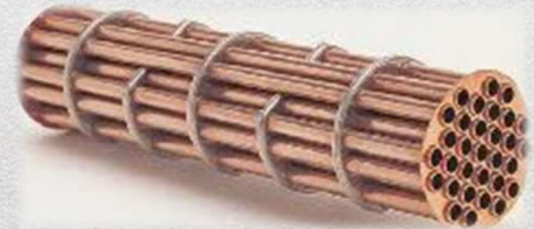
- 210,000 sq. ft.
- 3 shifts / 5 day weeks

- **ISO 17025 Accredited Laboratory**

- Dimensional
- Mechanical - *tensile, yield, elongation, hardness*
- Microstructural Analysis - *grain*
- Residual Stress
- Conductivity
- Optical Emission Spectrometry (OES) - *chemical analysis*

- **On-site Customer Service:**

- Servicing customers' needs at the production site
- Gateway for customer to STP's commercial and technical services
- Quotation requirements
- Order Processing / Special Requests

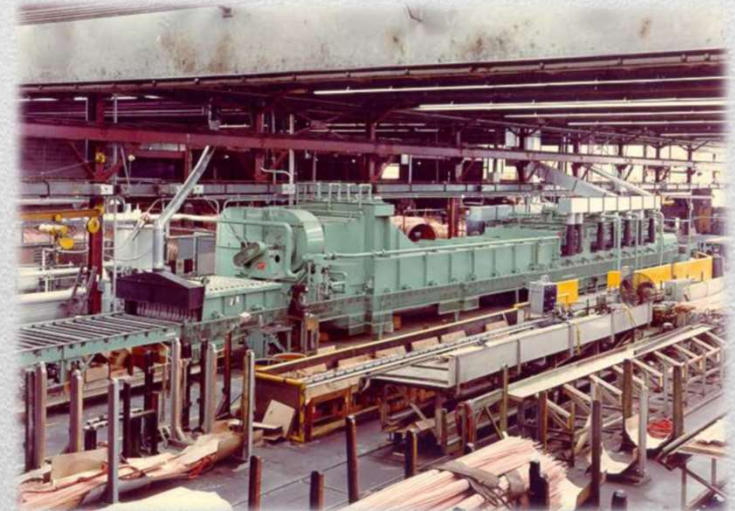
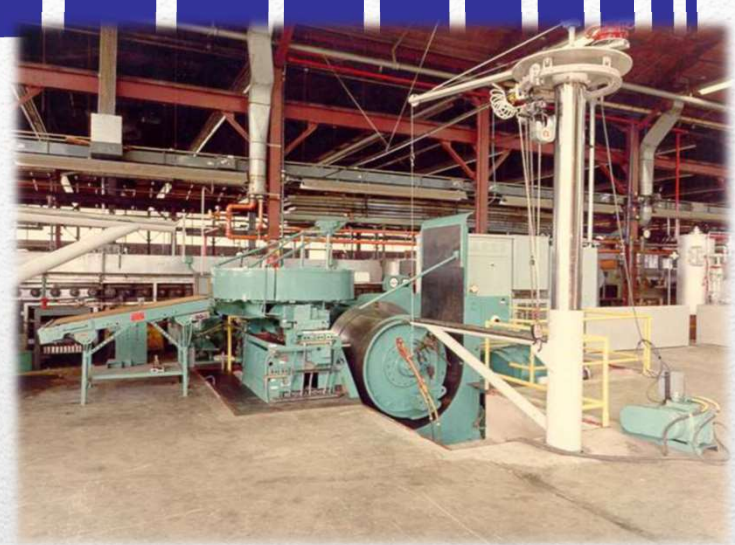






# STP Core Competencies

- **Precision redrawing of metals**
  - *22 different copper alloys, 2 Aluminum alloys*
  - *Die profiling expertise*
- **Precision straightening**
- **Shapes (*>1000 architectural combinations*)**
- **Short Cut-To-Length**
- **Small lot sizes - 100 lb. minimum**
- **ISO 9001 registered facility**
- **Lean Enterprise Culture**



Photos circa 1965





# Large Selection of Alloys

(listed by UNS Numbers)

## Coppers

- C10100
- C10200
- C12000
- C12200
- C14200 (special order)
- C19400

## Copper-Nickel

- C70600
- C71000 (special order)
- C71500

## Brasses

- C22000
- C23000
- C26000
- C27000
- C33000
- C33200
- C43500
- C44300
- C68700 (special order)

## Phos Bronze

- C51000

- C52100

## Nickel Silver

- C74000
- C75200

## Aluminum

- A91100
- A93003



Other Alloys may be available upon request

Precision cutting -0.125" to 42 foot lengths





# Tube Size Ranges

## COILS

### ALLOY

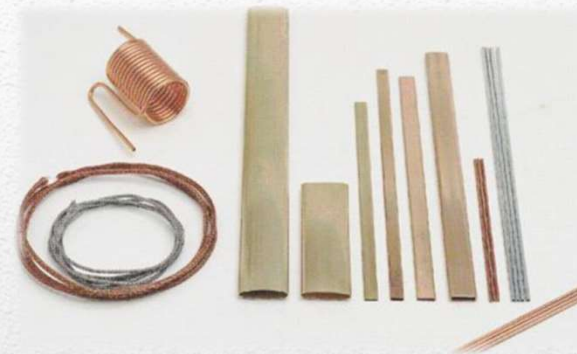
- Copper
- Brass
- Copper Nickel
- Aluminum

### OD

.040" - .875"  
.040" - .875"  
.040" - .875"  
.040" - .875"

### WALL THICKNESS

.005" - .200"  
.010" - .065"  
.010" - .070"  
.012" - .065"



## STRAIGHT LENGTHS

### ALLOY

- Copper
- Brass
- Copper Nickel
- Leaded Brass
- Phos Bronze
- Aluminum

### OD

.040" - 2.625"  
.125" - 2.625"  
.125" - 2.625"  
.109" - 1.375"  
.200" - .875"  
.040" - 2.000"

### WALL THICKNESS

.004" - .367"  
.010" - .175"  
.010" - .175"  
.010" - .200"  
.004" - .045"  
.012" - .200"







# STP In-House Tooling

**The essence of STP's quality tubing:**

- Tooling expertise
- In-house maintenance and engineering
- Skilled manufacturing people and processes

**Extensive training program for tool room personnel**

**Superior abilities with:**

- Die and plug profiling
- Maintenance of Shape Tools
- Saw blade sharpening
- Gage maintenance and design
- Problem Solving for drawing issues
- Tube straightening
- Short cut lengths
- 3-D Printing Technology

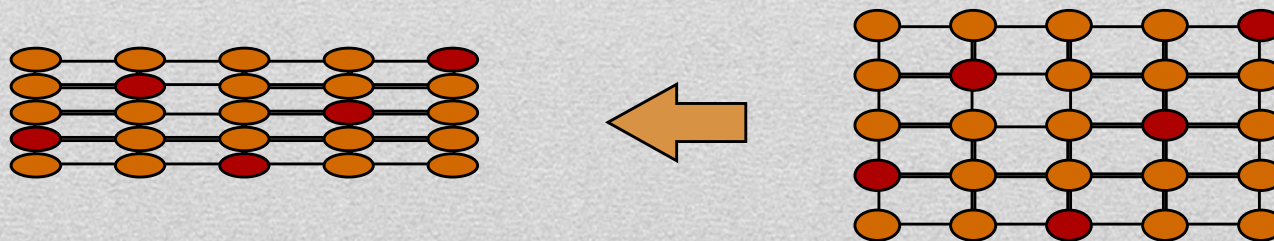
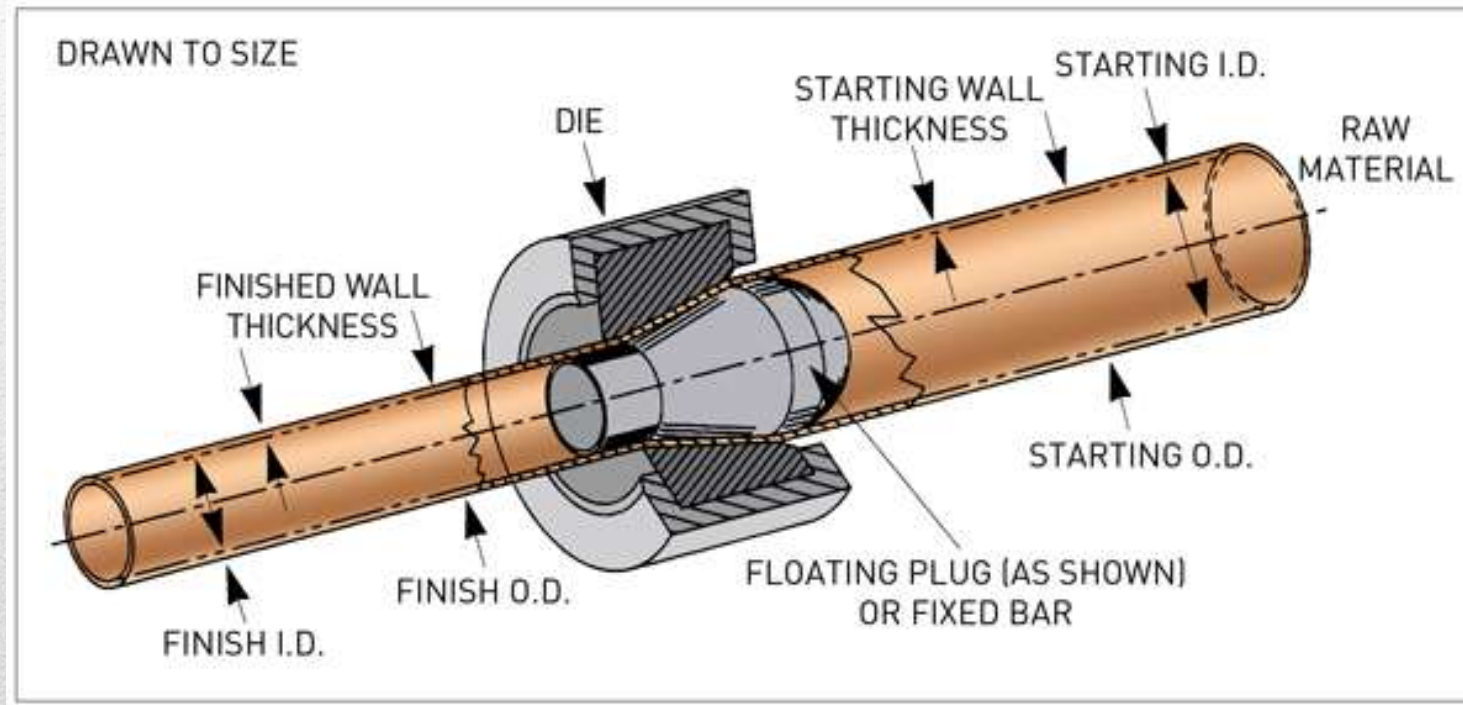






# The Essence of Tube Drawing

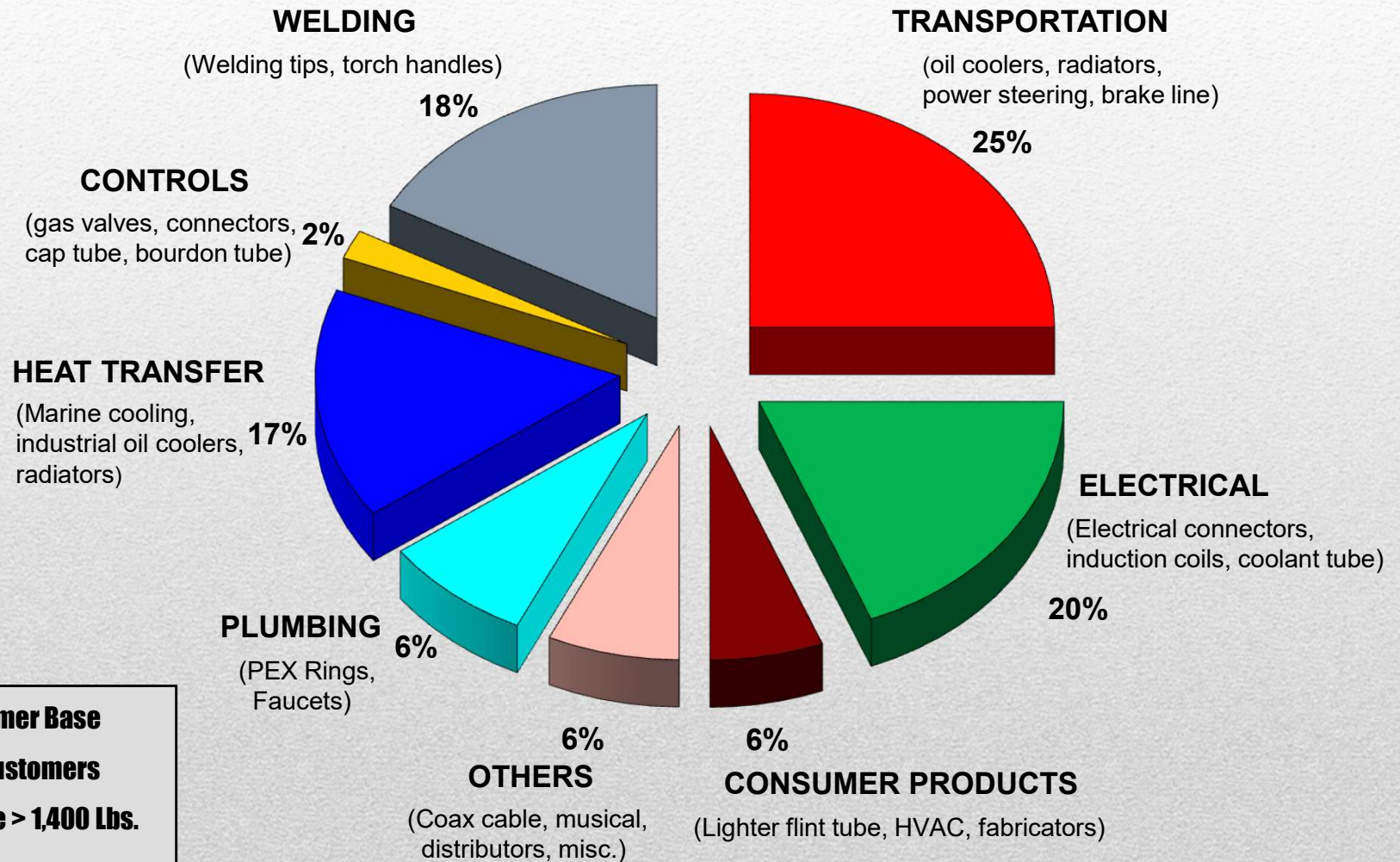
- How *Cold Work* is applied







# STP Served Markets



- **Diversified Customer Base**
- **Over 880 Active Customers**
- **Average Order Size > 1,400 Lbs.**





# Examples of Shapes

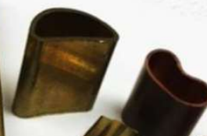
**Hourglass/Figure 8**



**Keyhole**



**D-Shape**



**B-Shape**



**Doghouse**



**Brushholder**



**Mailbox**



**I-Shape**



**Leak Detector Tube**



**Duplex**

**More than 1,000 different shapes and sizes!**

**Oval-Shaped,  
Fluted OD**



**Square/Round**



**Square OD and ID**

**Fluted OD/Round ID**

**Rectangle**







# Straight Length Packaging



**Bundle Pack Options**



**Wooden End  
Cardboard Boxes**



**All Cardboard Boxes**



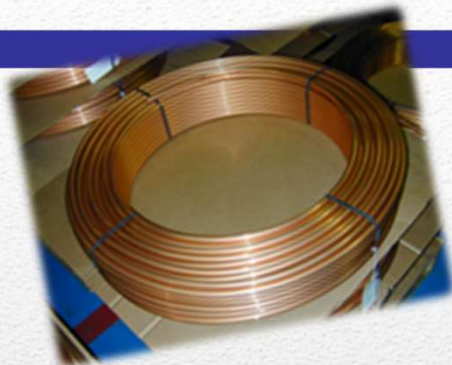
**All Wood Boxes**



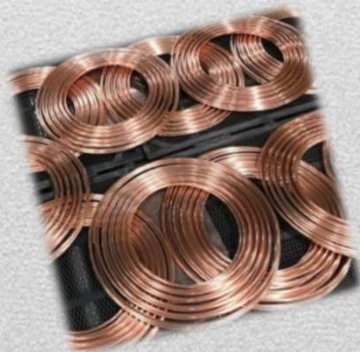


# Coil Forms and Packaging

**Bunch or Pancake Coils in Octagon-shaped cardboard box**



**Smaller coil diameter bunch or pancake coils in square cardboard box**



**Large Level Wound Coils packed in cardboard box or shrink wrapped**







# Tube Fabrication

- All Copper Alloys, Brasses, Bronzes, Copper Nickels
- Dedicated Fabrication New Product Development Engineer



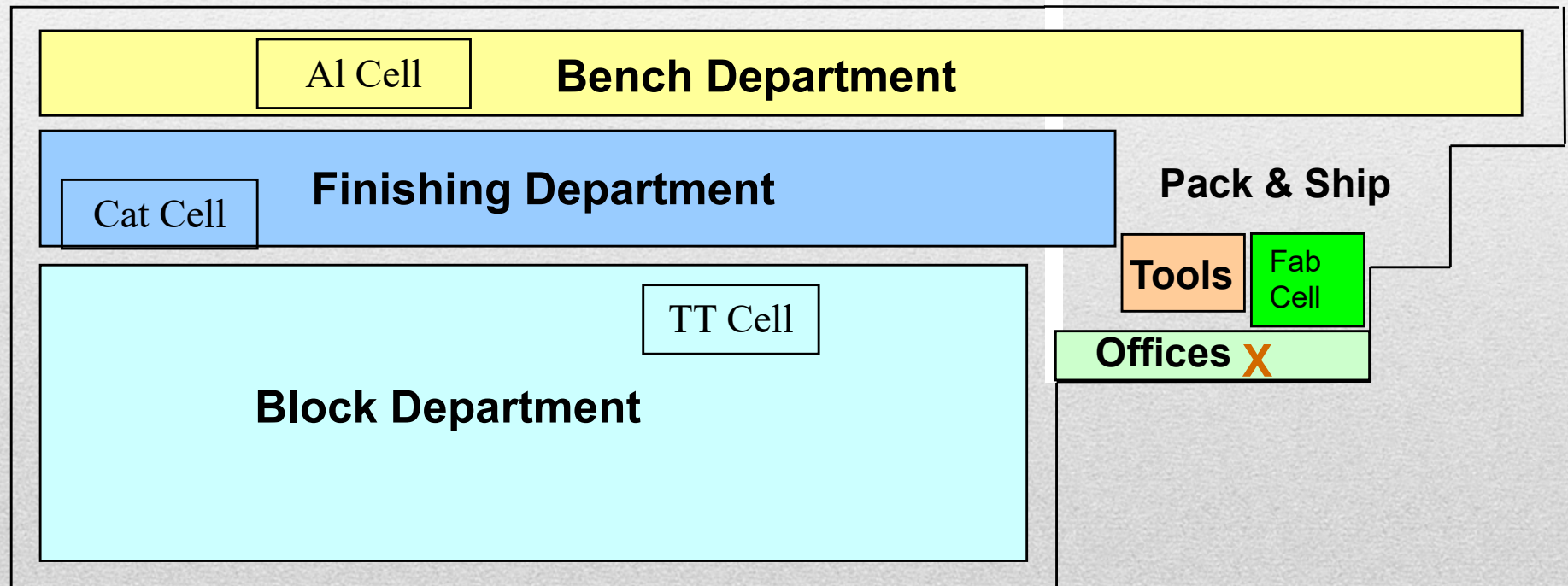
**Bending, Expanding, Swaging,  
Counterboring, Spinning, Incising,  
beading, special coiling, as well as  
other fabrications**







# Plant Floor Layout







# Product Display

