

# **MILL TOURS**

**ALL VISITORS MUST REVIEW AND  
ACKNOWLEDGE MHS-H  
SAFETY RULES AND GUIDELINES**

**REMOVE ALL RINGS AND WATCHES,  
CLOSED TOE FOOTWEAR ONLY, SLACKS  
ARE RECOMMENDED.**

**NOTIFY APPROPRIATE MANAGER THAT  
YOU WILL BE IN THEIR AREA BEFORE YOU  
BEGIN THE TOUR.**

## **MELT SHOP**

### **SCRAP BAY**

100 TON AC EAF/ 80 MVA TRANSFORMER  
650,000 SCFM BAGHOUSE  
10 BIN ALLOY SYSTEM  
LMF 18 MVA  
VTD/5 INJECTOR STEAM SYSTEM  
3 STRAND BLOOM CASTER/12 METER RADIUS  
SEN & EMS IN MOLD  
10.1" x 14.3" BLOOM/ SOFT REDUCTION  
7" X 7" BILLET

## **GRADE CAPABILITY**

- ASTM A36 And A572 Grade 50
- 1000 Series Carbon
- 1100 Series Resulfurized
- 1215 Rephosphorized and Resulfurized Carbon, 1500 Series Carbon
- 4000 Series Alloy, 4100 Series Alloy, 4300 Series Alloy
- 4600 Series Alloy, 4700 Series Alloy, 4800 Series Alloy
- 5100 Series Alloy, 8600 Series Alloy, 8700 Series Alloy, 8800 Series Alloy, 9300 Series Alloy
- Vanadium micro alloys, resulphurized grades, bearing- quality grades, boron- treated steels
- High- chrome grades: F2, F11, F22, F5, F9
- Low- sulfur inclusion shape
- Controlled grades-D1

*Special and/or restricted chemistries available upon request. Heat lots may be required. Please Inquire*

## **ROLLING MILL**

WALKING BEAM REHEAT FURNACE  
125 TPH COLD CHARGE/ 165 TPH HOT CHARGE  
10 X 14 BLOOM/ 7 X 7 BILLET @ 16' TO 28' OAL  
3000 PSI PRIMARY DESCALER  
VERTICAL/ HORIZONTAL 5 STAND POMINI ROUGHING MILL  
PENDULUM SHEAR BEFORE #6 STAND (CAN SHEAR UP TO 7" DIA)  
6 STAND POMINI INTERMEDIATE MILL/ DIAMETERS DOWN TO 2 5/8"  
CRANK SHEARS (SHEAR UP TO 5 1/16" DIAMETER BAR)  
#1 AFTER 9 STAND  
#2 AFTER 11 STAND  
ZUMBACH LASER GAUGE FOR SIZE VERIFICATION  
LARGE PRODUCT COOLING BED/ 125 FOOT LONG FOR DIAMETERS 2 5/8"  
AND LARGER  
4 TRICAM ABRASIVE SAWS 63" OR 66" DIA BLADES  
(2) SAWS FOR LARGE BARS  
(2) SAWS FOR SMALL BARS  
8 STAND MORGARD SHAMMAR FINISHING MILL/ DIAMETERS DOWN TO 1"  
SMALL PRODUCT COOLING BED/ 255 FOOT LONG FOR DIAMETERS DOWN  
TO 1"  
890 TON DANIELI START/ STOP SHEAR  
80' DANIELI STACKER

## **DIAMETERS AND SHAPES**

- 1" Rounds to 9" Rounds
- Rounds from 1 inch to 6 1/16" will be available in most 1/16" increments
  - Rounds from 6 1/4" to 9" will be available in most 1/4" increments
  - Intermediate and metric sizes can be produced provided certain minimum quantities are met. Please inquire
- 3" to 8" Round- Cornered Squares
- Round- cornered squares will be available in most 1/4" increments and are subject to accumulation.
  - Intermediate and metric sizes can be produced provided certain minimum quantities are met. Please inquire

## **BAR FINISHING**

### **BAR INSPECTION**

#### **Small-bar inspection line (Bay 1)**

- Capacity: 1 inch to 5 inches
- Bar lengths: 15 feet to 45 feet
- Bar straightening employing Bronx nine-roll bar- straightening machine (special straightness tolerance 1/8 inch in 5 feet)
- Bar chamfering
- Bar surface inspection employing Forester magnetic flux leakage (100-percent coverage of surface with seam detection of 1 percent or 1/2 percent of bar diameter)
- Bar ultrasonic inspection employing Magnetic Analysis Corp. rotary equipment (100- percent volumetric inspection using normal incidence and shear wave (capable of finding .040- inch-wide defects)
- 100- percent grade verification coil

#### **Large-bar inspection line (Bay 2)**

- Capacity: 2 1/2" to 9" rounds and 2 1/2" to 8" round cornered squares
- Bar lengths: 15 feet to 45 feet
- Pangborn shot blaster for surface cleaning
- 100- percent grade verification coil
- Bar surface inspection employing Magnetic Analysis Corp. eddy-current surface inspection (rotary probe and encirclir coil)
- Bar ultrasonic inspection employing Magnetic Analysis Corp. 48- channel ultrasonic flaw transducers in four fixed heads (capable of core testing to MIL-STD 2154 and Caterpillar 1E2122)

## **BAR TURNING LINE**

#### **Hetran BPC-4000 bar-processing cell**

- Capacity: 1.031 inch to 4.250 inches incoming diameter (can hold ASTM A108 tolerances) Capable of 1/8-inch stock removal per pass and 25-Ra maximum surface roughness
- Bar length: 12 feet to 26 feet
- Bar chamfering
- Eddy- current surface inspection (MAC rotating probe)

## **BAR FINISHING (cont.)**

### **BAR HEAT TREATING**

- Five Sauder Energy Systems car-bottom furnaces
- 30,000- gallon quench tank with agitation
- One high-temperature furnace up to 2100 F with +/- 10 F
- Four low-temperature furnaces up to 1800 F with +/- 10 F
- Maximum bar length: 35 feet
- Diameter restriction: 1 inch to 12 ½ inches
- Quench and temper, anneal (LP, cold shear, and spheroidize), normalize, and stress relieve

### **BAR STRAIGHTENING**

- Quantity: two straighteners
- Capacity: 1-inch to 7-inch rounds
- Straightness tolerance: 1/8 inch in 5 feet

### **BAR SAW CUTTING**

#### **Nishijimax precision carbide rotary saws**

- Quantity: two
- Capacity: 1- inch to 5.9- inch (up to 150 mm) diameter rounds
- Cut length: ½ inch to 118 inches
- Standard-length tolerance: +/- .010 inch (Special- length tolerance +/- .002 inch per 18 inches of length)

#### **Hem high-speed double- column band-saw line**

- Capacity: 4 inches through 25 inches round as well as bundle cutting
- Cut length: 6 feet to 24 feet
- Accuracy: 0, + ¼ inch (inquire for more precise length tolerances)

