



MET-TECH | Product Data Sheet

COPPER SEAMLESS TUBE PRODUCTION LINE - BILLET DIA. 80-120 MM - MIN. T

Ref. No.: TUBELINECU170701

Year: 1974-2005

Brand: INNSE, SMS, MDM, LOI, SCHUMAG, MRB ETC.

Qty. 1 Second-hand copper seamless tube production line

Mfc.: INNSE, SMS (Mannesmann Demag-Meer), LOI, Hacker, Schumag, Lühr, Firbimatic, MRB

Built: 1974 ? 2005

Entry Material: Billet sizes

Billet weight: approx. 500 kg Billet temperature

Exit Material - Tube sizes of each step of process:

Piercing mill: Dia. 115 mm Wall thickness

Pilger mill: Dia. 58 mm Wall thickness

Spinner # 1: Dia. 6.0 mm Wall thickness

Spinner # 2: Dia. 6.0 mm Wall thickness

Spinner # 3: Dia. 6.0 mm Wall thickness

Spinner # 4: Dia. 6.0 mm Wall thickness

Drawing machine: Dia. 0.6 ? 267 mm Wall thickness

Scope of supply: Billet Furnace Exhaust Air System Billet Brushing Machine

Cold Circular Saw Rotary Piercing Mill Straightening Machine Pilger Mill Emulsion Plant Central Lubrication System Tube Transportation System Spinner # 1 Spinner # 2 Spinner # 3 Spinner # 4 Induction Annealing Line Drawing Machine Degreasing Unit Basket Magazine Basket Lifting Device Tube Transport Baskets Spare Parts

Technical Specification

Billet Furnace Mfc.: LOI Built

Max. Temperature: ? Heated by gas No. of zones

Charging & discharging device Electrical Cubicle

Exhaust Air System Mfc.: LOI Built

Roller table with billet brushing machine Mfc.: LOI Built

Cold Circular Saw - Station Mfc.: ? Built

New electrical & mechanic parts in 1978 New adjustable bumper in 1997

Speed: ? Blade dia.

Rotary Piercing Mill Mfc.: INNSE Built

Standard version: Min/Max. billet; dia. x length

Billet length: min / max 7000 / 14000 mm ?? Feeding system

Roller application angle: 5 - 9 ° Roller speed (min/max)

Additional Transverse transport unit Tube transportation system to the piercing mill

Main motor Max. power: 2 x DC 700 kW, 1000 RPM

Dimensions of pressure rollers: (diameter x width) 116 - 145 x 450 mm

Dimensions of pressure rollers: (dia. x W) 650 x 500 mm

Roller material (material No.): 1.2343

Core material of the pressure rollers: 1.2343 Hardness of the outer alloy

Mandrel diameter: 86 mm Mandrel material

Mandrel adjustments by motor

Service life: (rel. to km of bloom) Rollers 24.2 Mandrel 3.6 Pressure roller 36.3 ????

Use of the system: (hours per week 1992) 120

Time needed to change the tools: 150 min.

Time needed to change the mandrels: 2 min.

Time needed to change pressure rollers: 30 min.

Incoming billets Dia. x L: 115 x 5400 mm Weight

Outgoing billets Dia. x width x length: 115 x 13 x 12500 mm

Roller speed: 70 ? 90 RPM Max. performance

Roller application angle: (°) 7 Degree of deformation

Machine availability: (%) 82 Rotary crane ? Load

Electrical Control System PLC ??? Bridge crane

Cooling water filter system Transformer Primary ? Secondary V, ? kVA

Hydraulic turning table Exit roller table

Straightening Machine Mfc.: Built

Entry and exit roller table

Pilger Mill Mfc.: SMS (MDM) Built

Type: Cold pilger mill 3 x 115 VMR

Feeding system: Continuous Chain transportation system

Strokes: (max/actual) 90 / 85 per min.

Feed rate: 15.8 / 14.1 mm/stroke Filter

Shell length: max/min. 14000/8000 mm Shell dia.

Shell weight: 500 kg

Exit material:

Tube dia.: OD/ID 58 / 53.2 mm Tube length

Max. tube eccentricity: (%) ± 2

Main motor Max. power 950 kW, 800 RPM, DC

Calibrating roller manufacturer: Kind+Co / Century

Rolling Calibrating roller (diameter x width): 610 x 220 mm

Tools Calibrating roller material (material No.): TQ1 / 1.2344

Calibrating roller hardness: (HRc) > 52

Service life of calibrating roller (rel. to km of pilger pipe) Material Cu:

Approx. 350 ? 2000 ???

Mandrels: Material 1.2363 Chrome plated? Yes - thickness 0.003 mm

Hardness: (HRc) 54 - 56

Time to change the calibrating roller: 3.5 h Time to change the mandrels

Degree of deformation: (%) 100 Machine availability

Electrical Control Control station PLC ???

Noise protection cover Tube guiding system ? pilger tunnel

Turning device pilger tools Mandrel support

Emulsion Plant Mfc.: ? Built

Capacity: ?

Central Lubrication System Mfc.: Delimon Built

Type: ? Capacity

Tube Transportation System Mfc.: Built

Length: ? Ejection unit

Second-hand pre-draw spinner block MR1

Manufacturer: Marshall Richard (MR) Year of mfc./assembly

Modifications: 1998 controls & 2003 drum

Standard version: VN CB 84 Direction of rotation (from above)

Block diameter: 2134 mm Max. tube inlet dia., ext. dia. x wall thick.

Min. tube outlet dia. ext. dia. x wall thick.: 6 x 1 mm Max. pulling force

Max. pulling speed: 750 m/min.

Dancers with automatic speed regulation Type: Ultrasound

Pressure rollers (set x number per set): 3 x 2 No. of baskets in circulation

Discharge/mounting table. max. load cap.: approx. 1500 kg

Tool material: Tungsten carbide External lubricator

Mandrel material: Tungsten carbide Main motor Max. power

Discharge Table Motor Max. power: DC 30 kW, 1750 RPM

Mounting table Motor Max. power: DC 30 kW, 1750 RPM

Coil weight: 500 kg Time needed to change the tools

Machine availability: (%) 79.8 Roller table - 2011

Electrical Control Mfc.: ? PLC Control supplier

Pointing station (new hydraulic & el. control ? 2013) Pulling carriage ? 1985

Pre-straightener ? 1980 Basket lifting device

Transformer

Second-hand spinner block MR2

Manufacturer: MR Year of mfc.

Modification in 1998 Control system Standard version: VN CB 84

Direction of rotation (from above): right (clockwise) Block diameter

Max. tube inlet dia., ext. dia. x wall thick.: 58 x 2.4 mm

Min. tube outlet dia. ext. dia. x wall thick.: 6 x 1 mm Max. pulling force

Max. pulling speed: 1000 m/min. No Relaxation device for cutting

Dancers with automatic speed regulation Type: Ultrasound

Pressure rollers (set x number per set): 1 x 2 3 x 1

Number of baskets in circulation: 7

Discharge/mounting table, max. load cap.: Approx. 1500 kg

Tool material: Tungsten carbide External lubricator

Mandrel material: Tungsten carbide Main motor Max. power

Discharge table Max. power: DC 30 kW, 1750 RPM

Mounting table Max. power: DC 30 kW, 1750 RPM

Use of the system (hours per week) 144 Coil weight: 500 kg

Time needed to change the tools (min): 0.5 Machine availability

El. Control ? 1975 Lubrication system ? 1980

Pulling carriage ? 1985 Rotary crane

Hydr. tube pointing machine ? 1992 Basket feeding device ? 1979

Transformer

Second-hand spinner block MR3

Manufacturer: MR Year of mfc.

Modification in 1999 Control system Standard version: VN CB 84

Direction of rotation (from above): right (clockwise) Block dia.

Indicator Max. tube inlet dia., ext. d. x wall thick.: 29 x 1.45 mm

Min. tube outlet dia., ext. d. x wall thick.: 6 x 1 mm Max. pulling force

Max. pulling speed: 1120 m/min. No Relaxation device for cutting

Dancers with automatic speed regulation Type Ultrasound

Pressure rollers (set x number per set): 1 x 2 2 x 1

Number of baskets in circulation: 13

Discharge/mounting table, max. load cap.: Approx. 1500 kg

Tool material: Tungsten carbide External lubricator
Mandrel material: Tungsten carbide Main motor Max. power
Discharge table Max. power: DC 30 kW, 1750 RPM
Mounting table Max. power: DC 30 kW, 1750 RPM
Use of the system (hours per week): 144 Coil weight
Time needed to change the tools (min): 0.5 Machine availability
 Hydr. tube pointing press ? 2009 Pulling carriage ? 1985
Electrical control ? 2001 Mfc. ? Type: ?
 Rotary crane Lubrication system ? 1994 Transformer
 New basket circulating system ? 2007
 Second-hand spinner block MR4
Manufacturer: MR Year of manufacturing
Standard version: VN CB 84 Direction of rotation (from above)
Block diameter: 2134 mm
Indicator Max. tube inlet dia., ext. dia. x wall thick.: 45 x 2.1 mm
Min. tube outlet dia. ext. dia. x wall thick.: 6 x 1 mm Max. pulling force
Max. pulling speed: 900 m/min.
 Dancers with automatic speed regulation Type Ultrasound
Pressure rollers (set x number per set): 3 x 2
Number of baskets in circulation: 7
Discharge/mounting table. max. load cap.: Approx. 1500 kg
Tool material: Tungsten carbide External lubricator
Mandrel material: Tungsten carbide Main motor Max. power
Discharge table Max. power: DC 30 kW, 1750 RPM
Mounting table motor Max. power: DC 30 kW, 1750 RPM Coil weight
Time needed to change the tools (min): 0.5 Machine availability
Tube pointing machine Mfc.: ASMAG Type
 Pulling drum ? 1990 Pulling die holder ? 1990 Rotary crane ? 2001
 Lubrication system ? 1996
 Induction Annealing Line
Mfc.: Built
 De-coiler Dancer Straightening machine
 Marking unit Annealing furnace Oil transformer Extraction system (oil vapour)
 Electrical Control ? 2008 Guiding rolls
 Qty. 2 Induction coils ? spare ? 2010
 Drawing Line F4
Mfc.: Schumag Type
Flying shear Mfc.: Hacker Type

Roll cross Mfc.: Hacker Built

Tube pointing machine Straightening machine ? horizontal-vertical Blow-out device

Exhaust system Mfc.: Lühr Type

Perchloroethylene Degreasing Unit

Manufacturer: Firbimatic Year of manufacturing

Features: Activated carbon Vacuum pumps Distillation Tank system

Refrigerating plant Working chamber

Max. coil weight: (t) 2.5 Max. coil diameter

Min. pipe diameter: (mm) 12 Max. pipe diameter

Min. pipe length: (m) 3 Max. pipe length

Cycle time Approx.: 30 min Operating voltage

Connected power: 180 kW, 185 A Amount of solvent

Working ? degreasing chamber ? 2011 Electrical Control

Steam generator in Container Mfc.: Hada Type

Heating coil for steam generator ? spare - 2007

Basket Transport System

Qty. 250 Tube transport baskets - 1983 Qty. 35 Tube support devices ? 1986

Basket storage area ? roller table ? 1980 Basket lifting device ? 2007

Spare Parts

For all above specified equipment there are a lot of maintenance parts and spare parts

available i.e. crank shaft for pilger mill ? 2000 etc.

Please advise if further information is requested.