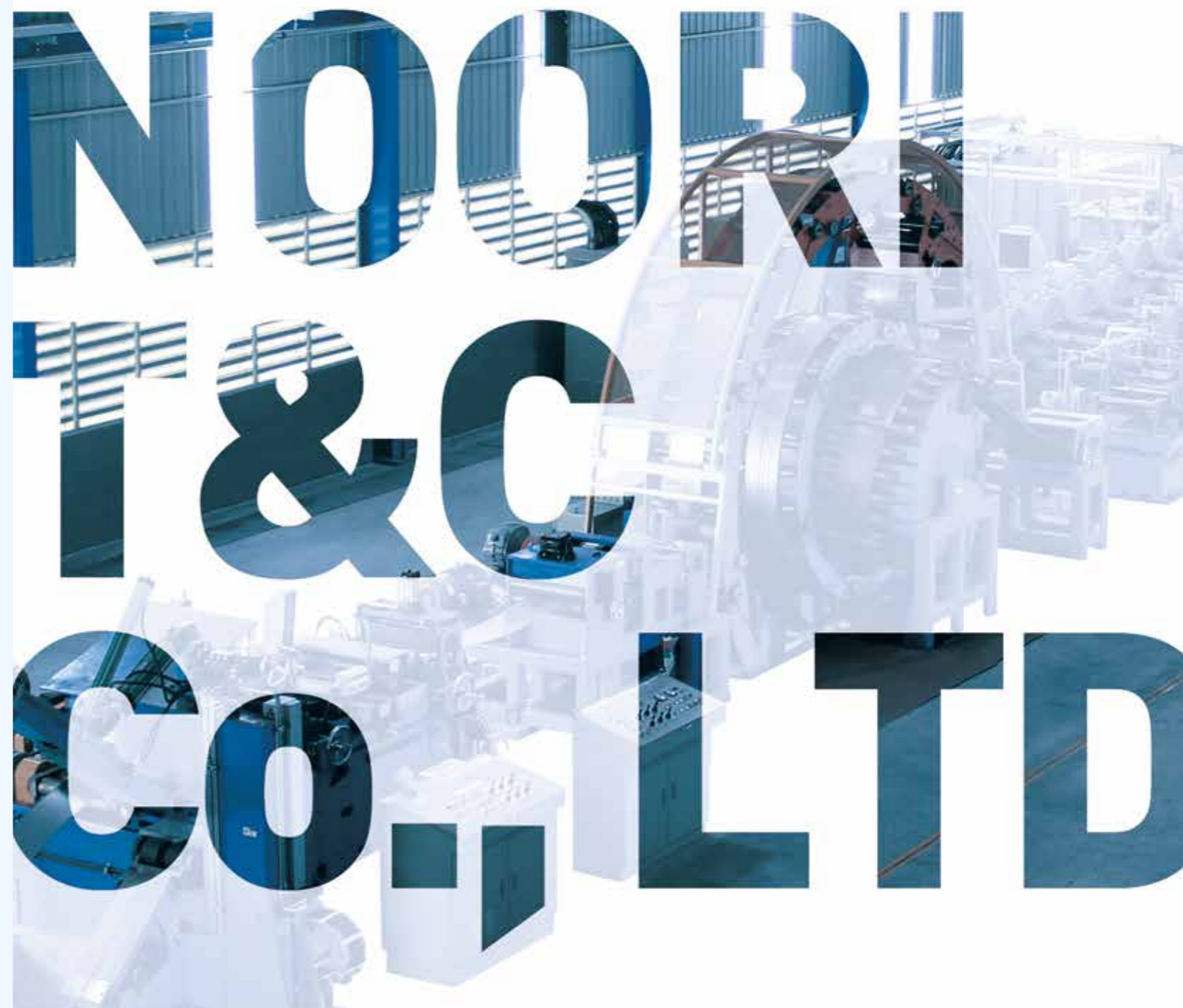


Technology to lead the innovation



Technology to lead the innovation NOORI T&C



Technology to lead innovation

We, NOORI T&C, are the manufacturer of tube mill line and related equipments to produce ERW(Electrical Resistance Welding) pipe and we have served for our customers for long years.

We always do our best in every process from design to manufacturing, keeping management philosophy on our mind that we can make best only if we are faithful to the basics. We also accomplish research and development continuously and as a result, we now have several kinds of advanced technology.

We supply our customers with the machinery, which is most convenient and in high degree of completion and we find our work worth to see our customers are happy and satisfied with it.

We will try to become good partner to be able to come up to expectations of the customers, preparing in unchanged manner all the time. Thank you!

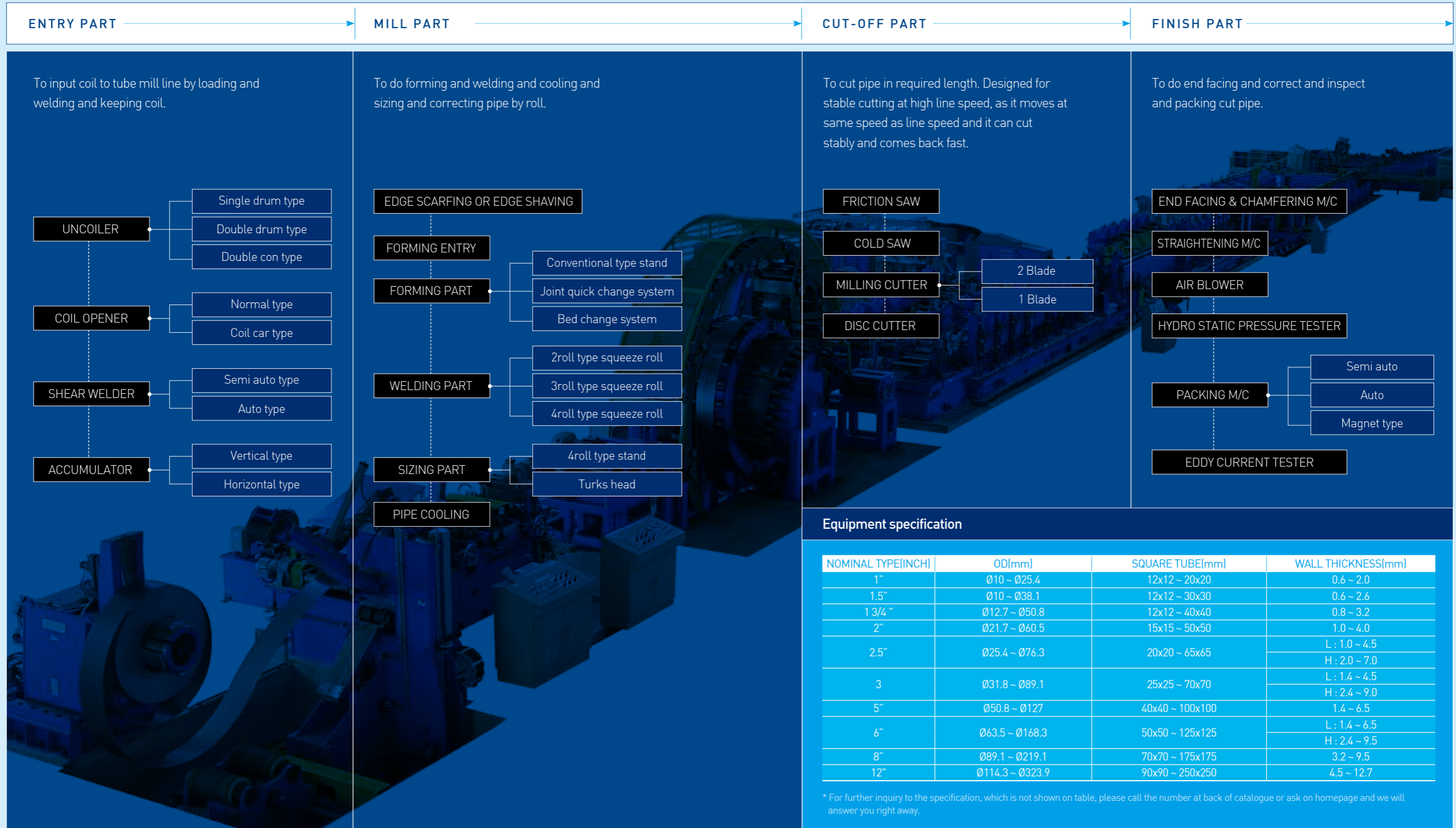
CONTENTS

Company overview	02
Facilities Overview	04
Tube mill line	04
Equipment flow	04
Equipment specification	05
About equipment	06
Entry part	06
Mill part	12
Cut off part	18
Finish part	24
The other parts	28
About the Institute	30

Tube Mill Plant of NOORI T&C

Tube mill line of NOORI T&C is to produce ERW (Electrical Resistance Welding) pipe to be used for general structure, water pipe, plumbing and wiring..etc. as basic material at industrial site. It does form tube shape using steel coil the customer need and weld using high frequency heating and cut in required length and pack in required shape.

This plant consists of 4 major parts - entry part, mill part, cut-off part, finish part – and we can compose the line according to kinds of pipe, working condition and process the customer need.



To input coil to tube mill line by loading and welding and keeping coil.

UNCOILER

To load coil to supply to tube mill

Single drum type, Double drum type, Double con type

COIL OPENER

To unwind coil on uncoiler and supply it to shear & welder

Normal type, Coil car type

SHEAR & WELDER

To connect the ends of two coils by cutting and welding

Semi auto type, Auto type

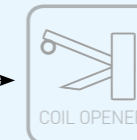
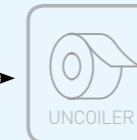
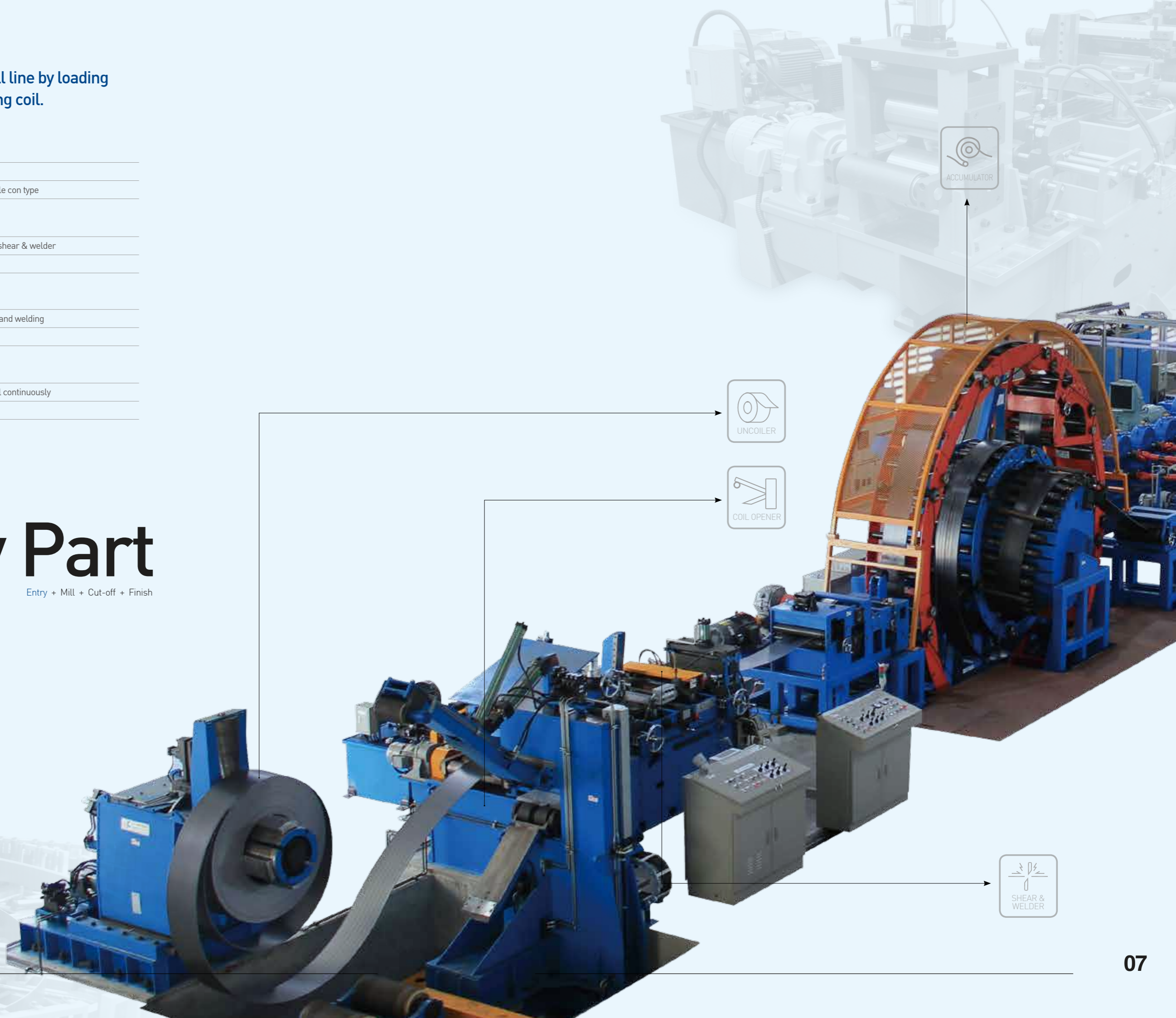
ACCUMULATOR

To save coil in order to supply it to tube mill continuously

Vertical type, horizontal type

Entry Part

Entry + Mill + Cut-off + Finish



Entry Part UNCOILER

UNCOILER + COIL OPENER + SHEAR & WELDER + ACCUMULATOR



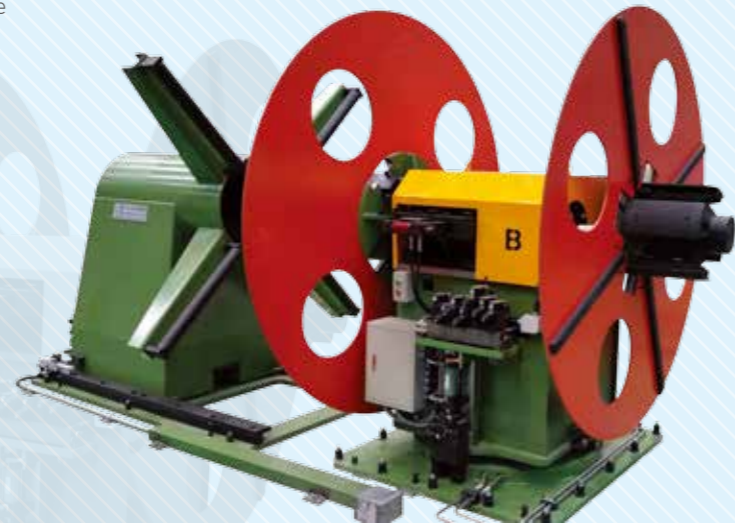
Double drum uncoiler

hydraulic and revolving type

To be able to set two coils at the same time and good production efficiency and less tiredness of operator and stable movement by hydraulic.

SIZE

0.5" ~
3.5"



Single drum uncoiler

hydraulic and forward/backward movement

Easy to input coil through coil car and stable movement by hydraulic.

SIZE

4" ~



Entry Part COIL OPENER

UNCOILER + COIL OPENER + SHEAR & WELDER + ACCUMULATOR



General coil opener

hydraulic and fixed type

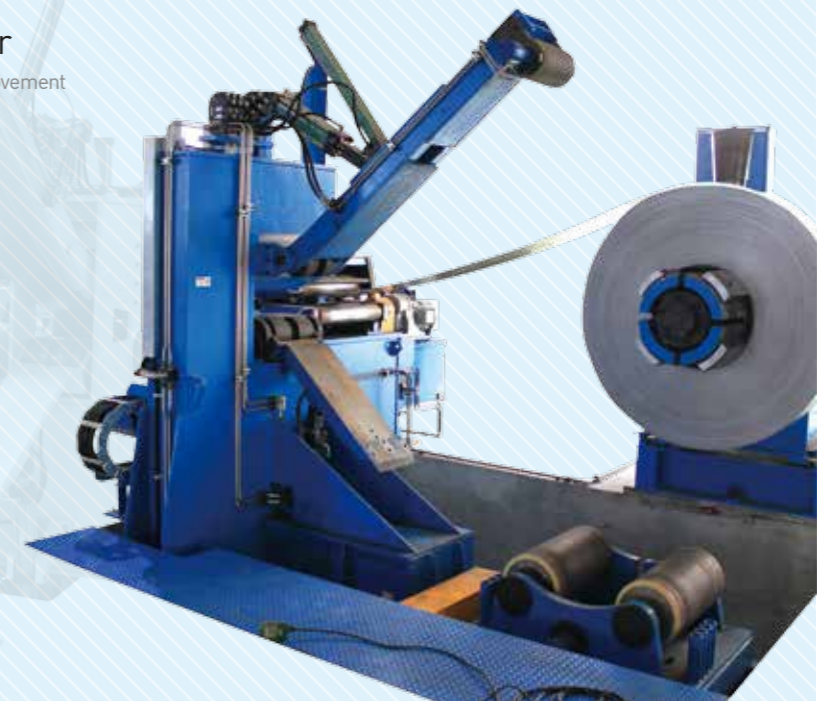
To be able to be used regardless direction of unwind as it has rollers on top and bottom.



Coil opener by coil car

hydraulic and forward/backward movement

To be able to be used regardless direction of unwind as it has rollers on top and bottom and be able to input quickly by using coil car.



Entry Part SHEAR & WELDER

UNCOILER + COIL OPENER + SHEAR & WELDER + ACCUMULATOR



Semi auto shear & welder

TIG welding and hydraulic cutting

No need of grinding and good welding performance.

SIZE

0.5" ~
2.5"



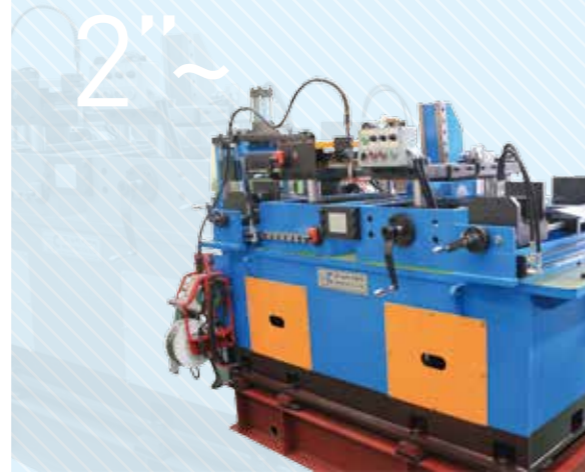
Automatic shear & welder

CO2 welding and hydraulic cutting

Full automatic cut and welding.
Adjustable edge of coil.

SIZE

2" ~



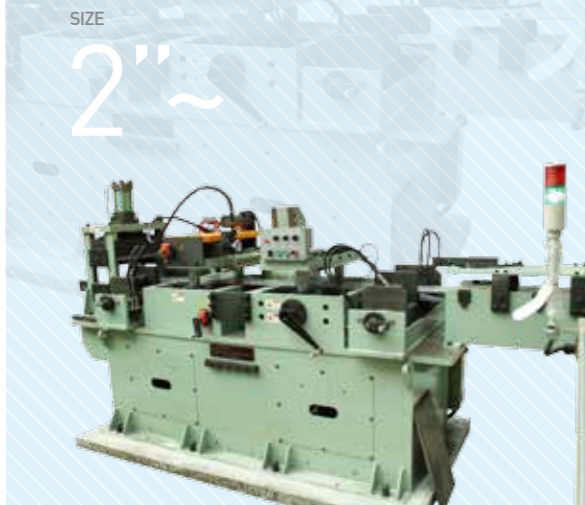
Automatic shear & welder

CO2 welding and hydraulic cutting

Full automatic cut and welding.
Adjustable edge of coil.

SIZE

2" ~



Automatic shear & welder

CO2 welding and hydraulic cutting

Full automatic cut and welding.
Adjustable edge of coil.

SIZE

2" ~



Entry Part ACCUMULATOR

UNCOILER + COIL OPENER + SHEAR & WELDER + ACCUMULATOR



Accumulator

Vertical type

Less of coil deviation and drooping of coil.
It can forward/backward even during operation
and less scratch on coil during saving.

SIZE

0.5" ~
7"



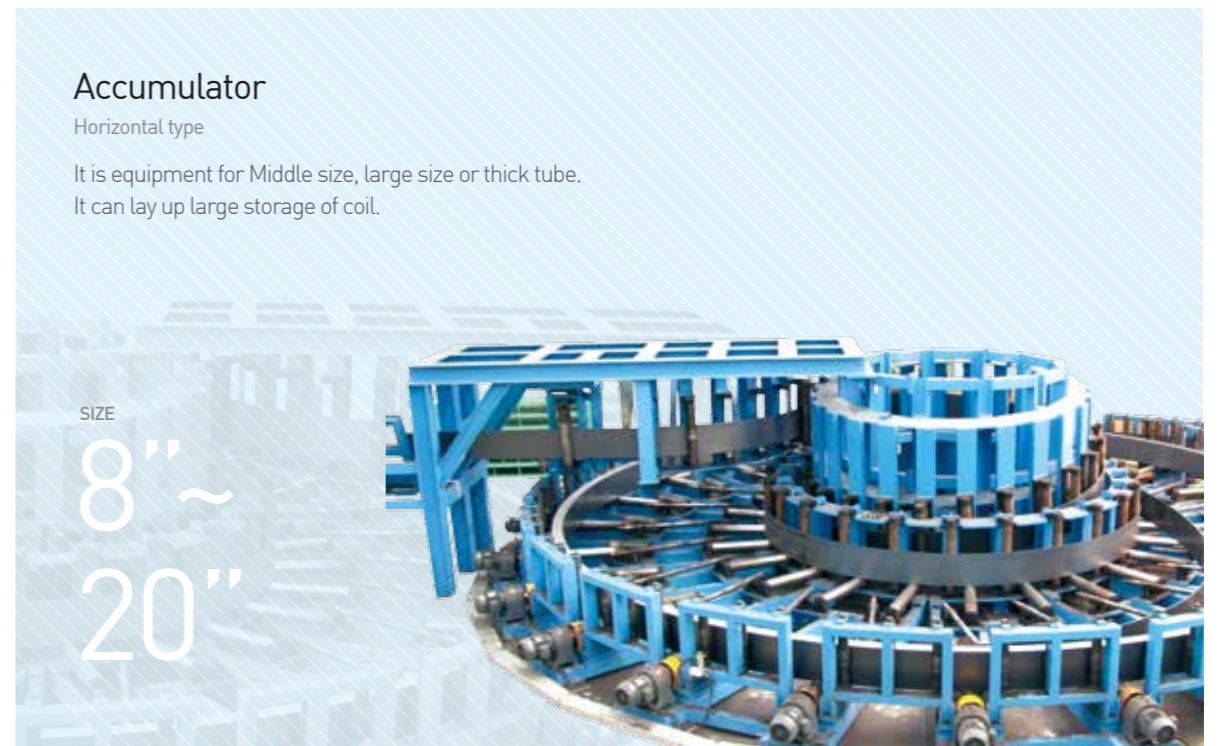
Accumulator

Horizontal type

It is equipment for Middle size, large size or thick tube.
It can lay up large storage of coil.

SIZE

8" ~
20"



Mill Part Forming Bed

Entry + Mill + Cut-off + Finish

To do forming and welding and cooling and sizing and correcting pipe by roll.

FORMING PART

To shape pipe by using roll

Conventional type stand, Joint quick change system, Bed change system

H.F. WELDER(ERW)

To weld both ends of formed pipe by high frequency welder

BEAD CUTTER

To cut off bead of welding

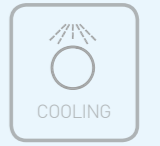
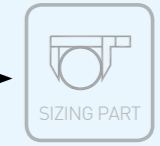
COOLING

To cool pipe by water or air cooling system



Mill Part Sizing Bed

Entry + Mill + Cut-off + Finish



To do forming and welding and cooling and sizing and correcting pipe by roll.

SIZING PART

To decide shape and size of pipe and correct it.

4roll type stand, Turks head

COOLING

To shape pipe by using roll

Mill Part Forming & Sizing Bed

FORMING PART + H.F WELDER(ERW) + BEAD CUTTER + SIZINGPART + COOLING



FORMING

To shape pipe by using roll.



SIZING

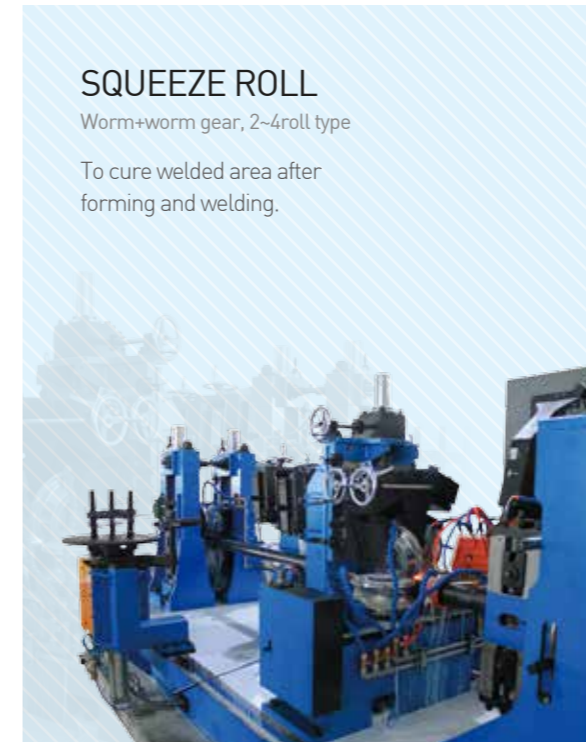
To fix and correct pipe after forming and welding.



STAND

Compose rolls, High stiffness designed

To load roll on it and designed and made for resistance against repulsive force occurred during forming and sizing.



SQUEEZE ROLL

Worm+worm gear, 2~4roll type

To cure welded area after forming and welding.



TURKS HEAD

Screw type, Face plate change type, Worm+worm wheel

To fix shape and correct straightness of pipe after squeezing.



QUICK CHANGE (QUICK COUPLER)

Hydraulic, Jaw coupling, Roll box change type

To change full roll box. Convenient and saving time and easy for quality control.



QUICK CHANGE (BED CHANGE)

Bed change type, Clamp type

To change full roll bed. Convenient and saving time and easy for quality control.

Cut-off Part

Entry + Mill + Cut-off + Finish

To cut pipe in required length. Designed for stable cutting at high line speed, as it moves at same speed as line speed and it can cut stably and comes back fast.

 CUT-OFF

Equipment to cut pipe in required length

FRICION SAW, COLD SAW, MILLING CUTTER, DISC CUTTER



Cut-off Part

CUT-OFF

CUT-OFF



FRICTION SAW

Hydraulic cutting with burr, DDS type

Need to do end facing due to burr.
Suitable for cutting small size of pipe at medium and high speed.

SIZE

~Ø114.3, ~6.0t



COLD SAW

DDS Type, Excellent cut surface without burr

Suitable for cutting small size and thin pipe.
Less error range in cutting length due to precise control speed and position by servo motor. Worth of saving materials. It can use for both HSS and TCT.

SIZE

~Ø63.5, ~3.2t



FRICTION SAW

Hydraulic cutting with burr, DDS type

Need to do end facing due to burr.
Suitable for cutting middle/big size of pipe at medium and high speed.

SIZE

~Ø168.3, ~8.0t



COLD SAW

DDS Type, Excellent cut surface without burr

Suitable for cutting small size and thin pipe.
Less error range in cutting length due to precise control speed and position by servo motor. Worth of saving materials. It can use for both HSS and TCT.

SIZE

~Ø50.8, ~3.2t



DISC CUTTER

Mainly for round pipe. Silence. Occur dent at surface.

Less noise and vibration.
No chip and dust.

SIZE

~Ø168.3,
~8.0t



1 BLADE MILLING CUTTER

DDS type, excellent cutting surface without burr,
weak about inside bead cutting

Less error range in cutting length due to precise control speed and position by servo motor. Worth of saving materials. Suitable for carbon steel pipe for structural purpose. It can use for both HSS and TCT.

SIZE

~Ø168.3, ~9.5t



Cut-off Part CUT-OFF



2 BLADE MILLING CUTTER

DDS type, excellent cutting surface without burr, double blade type, It is suitable for middle size pipe, Be able to cut pipe of hard materials.

Less error range in cutting length due to precise control speed and position by servo motor. Worth of saving materials. Suitable for pipe cutting of which inner bead is cut out.

SIZE

Ø76.3
~Ø190.7,
~9.5t



2 BLADE MILLING CUTTER

DDS type, excellent cutting surface without burr, double blade type, It is suitable for large size pipe, Be able to cut pipe of hard materials.

Less error range in cutting length due to precise control speed and position by servo motor. Worth of saving materials. Suitable for pipe cutting of which inner bead is cut out.

SIZE

Ø219.7
~Ø508,
~16.0t



Finish Part PACKING MACHINE

PACKING MACHINE + END FACING & CHAMFERING M/C + STRAIGHTENING M/C + HYDROSTATIC PRESSURE TESTER + EDDY CURRENT TESTER

equipment for
loading, discharging
and to make bundle.



Automatic packing machine(Fork type)

automatic loading and bundling and discharging

Automatically operation in all process. For both round and square/rectangular pipe. Easy to change for each kind of pipe. Less tiredness of operator and less manpower and worth of productivity increase.

SIZE

~8"



Automatic packing machine (magnetic type)

automatic loading and bundling
and discharging

Automatically operation in all process.
Suitable for medium and big size of pipe.
Magnetic lifting type.

SIZE

~16"



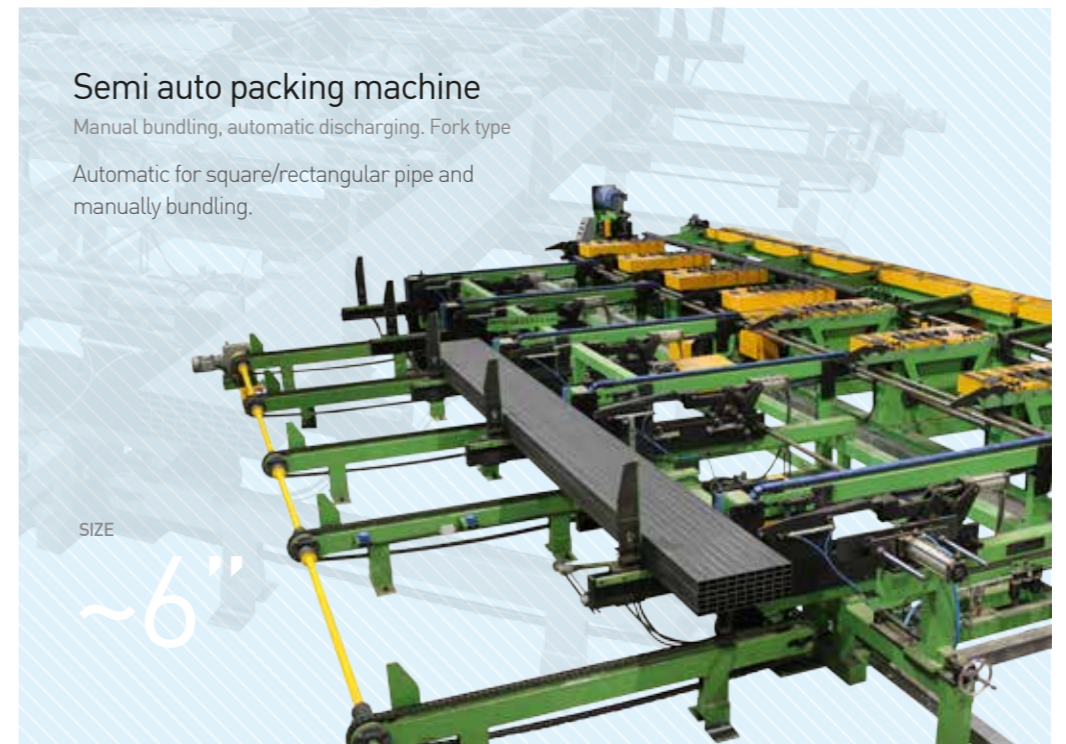
Semi auto packing machine

Manual bundling, automatic discharging. Fork type

Automatic for square/rectangular pipe and
manually bundling.

SIZE

~6"



Finish Part

END FACING & CHAMFERING M/C STRAIGHTENING M/C

PACKING MACHINE + END FACING & CHAMFERING M/C +
STRAIGHTENING M/C + HYDROSTATIC PRESSURE TESTER +
EDDY CURRENT TESTER



END FACING & CHAMFERING M/C

walking type. Hydraulic clamping

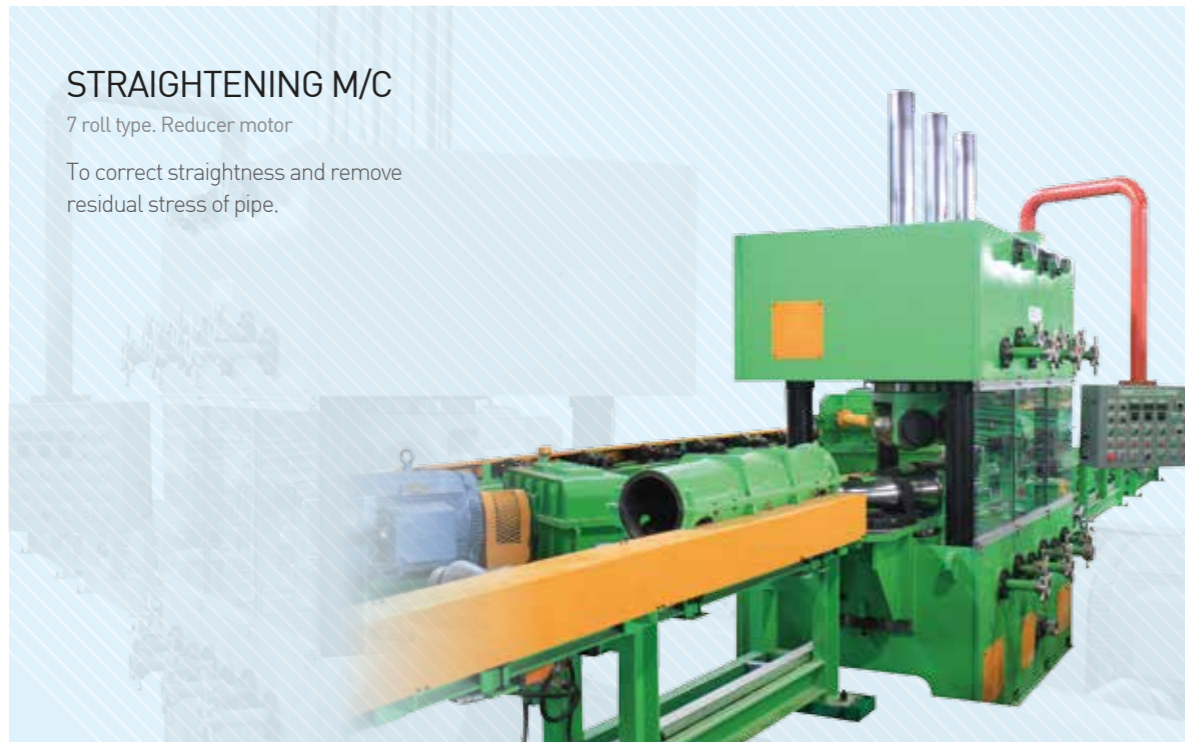
To do end facing of cutting surface by revolving head with bite. It consists of walking to move pipe and 1 or 2 of head and aligning moving parts. Automatic in all process (Manual operation also possible). Easy and silent to operate.



STRAIGHTENING M/C

7 roll type. Reducer motor

To correct straightness and remove residual stress of pipe.



Finish Part

HYDROSTATIC PRESSURE TESTER EDDY CURRENT TESTER

PACKING MACHINE + END FACING & CHAMFERING M/C +
STRAIGHTENING M/C + HYDROSTATIC PRESSURE TESTER +
EDDY CURRENT TESTER



HYDROSTATIC PRESSURE TESTER

Tie rod type. Be able to select one by one or several type

To test if finished pipe can endure at certain pressure by filling water inside pipe.



EDDY CURRENT TESTER

adjust main body by screw. Pinch roll drive by motor

To check out crack or defected welding of pipe by eddy current tester.



The Other Part

Pipe painting line, Roll forming, Threading M/C,
Round bar end facing & chamfering M/C

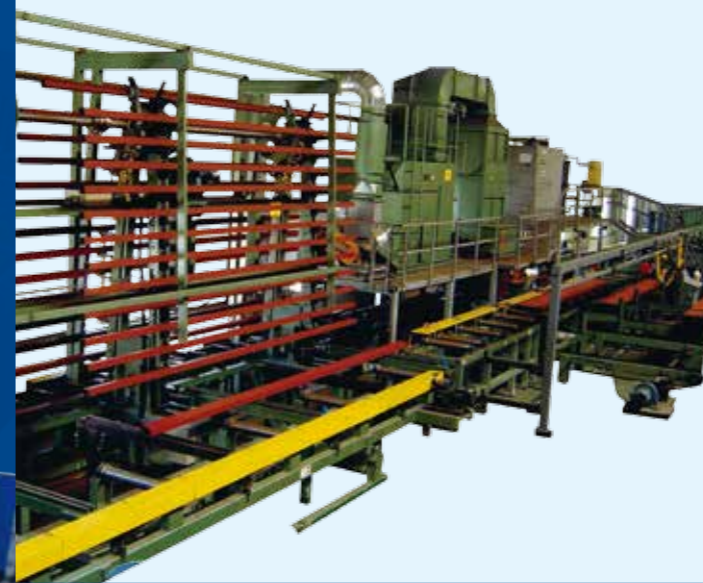
Threading M/C

To make threading on pipe by revolving head with
thread tool. Easy to operate using control panel.
Consists of walking, clamp and head.



Round bar end facing & chamfering M/C

To do end facing and chamfering
both sides of round bar.
It consists of alignment and walking and
head and clamp.



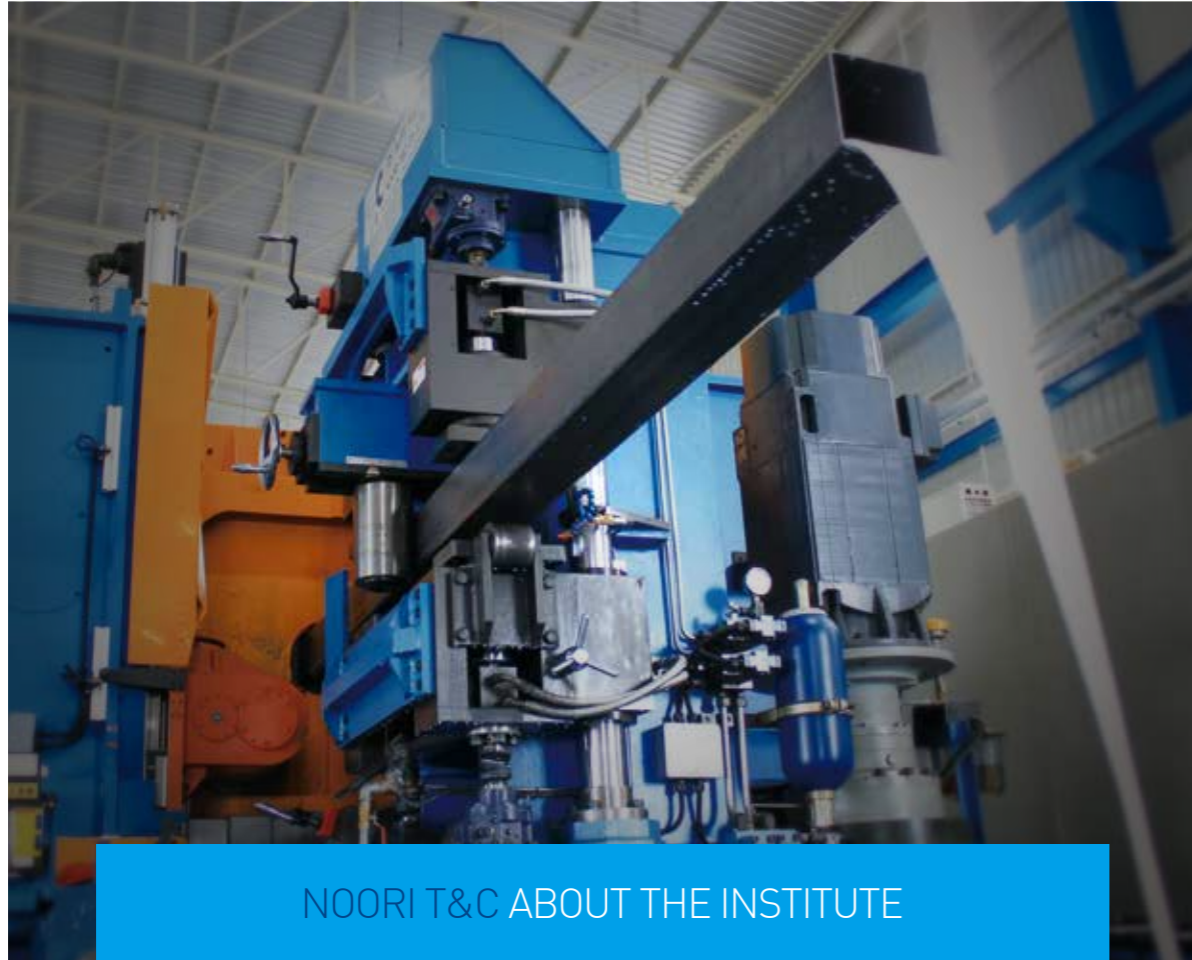
Pipe painting line

To paint water soluble paint
on finished pipe.
Automatic operation of input - washing -
heating by medium frequency - painting -
drying - packing.



Roll forming

To shape certain shape by using roll on coil.
It consists of input, forming and
correct and cutting.



NOORI T&C ABOUT THE INSTITUTE

Repay for customer's cheer, to provide equipment with high quality and high technology.

Our R&D center was established to find out what to improve on current equipments and to study in order to apply more advanced technology and make more advanced ones. Currently we are trying to develop knowhow to advance equipments based on excellent researcher and technology. Especially we do have lots of patent and new technology in cutting and packing and as a result we export to South East Asia, Middle East Asia and North America. We will do our best in doing research and develop in order to supply more convenient and excellent equipments.



Technology List

Cold saw	2 Blade milling cutter	1 Blade milling cutter	Auto packing - fork type	Threading M/C

Certificate

Pipe cut-off equipment	Clamp in pipe cut-off equipment	Pipe loading equipment

