



fives

Induction bending Cold bending



Fives Nordon expertise in the bending process
(geometry and metallurgy)

Fives Nordon has developed its expertise in carbon and stainless-steel bending for 60 years, while constantly improving its performance and technicality.

Fives Nordon has worldwide experience in the prefabrication and assembly of HP, MP, LP piping for the chemical - petrochemical industry, thermal or nuclear power plants and offshore.

COLD BENDING AND INDUCTION BENDING

For highly technical pipe bending, Fives Nordon has two induction bending machines and several machines for cold bending. Fives Nordon recently installed a new-generation **induction bending machine** to improve its performance.

MATERIAL GRADES

These methods give the possibility of bending welded pipes, seamless pipes, HEB-U profiles or other pipes of any section, square pipes, etc.

Our methods can be applied to the following materials:

- Carbon steels (API 5L X42-52-60-65-70, P265GH, P295GH...)
- Stainless steels (ASTM A 312 TP 304, 309, 316...)
- Duplex, SuperDuplex
- Alloyed steels (ASTM A 335 Gr P11, P22, P5, P9, P9.1, P9.2, X20, 15CD205, 15Mo3, 15NiCuMo)
- Inconel 625, Incolloy 800H
- Weld Overlay Cladded Pipes

APPLICATIONS

Bending is an essential operation used in the chemical and petrochemical industries, Offshore and Subsea, in thermal and nuclear power plants or for industrial piping and civil engineering projects.

We can perform bending according to several standards:

- CODETI / CODAP / COVAP
- RCC-M / RCC-MX
- ISO 15590-1 / NF EN 14870-1
- NF EN 13480
- NF EN 12952
- ASME B16.49 / ASME B31.3
- Guide GESIP N°2007/07
- As well as the specifications required by the customer

OTHER SERVICES OFFERED

In addition to bending, the technical expertise acquired by our teams allows us to offer you various services:

- Supply of mother pipes
- Drafting of procedures
- Qualification of Bend Manufacturing
- Shot blasting and polishing, coating
- Pickling and passivation
- Post-bending heat treatments (Solution annealing, normalisation, quenching and tempering, ...)



Capacities	Cold bending	Induction bending
Outside diameter (D)	13,7 mm - 60,3 mm	60,3 mm - 1016 mm
Wall thickness (e)	1 mm - 10 mm	5 mm - 100 mm
Bending angle (°)	0° - 180°	0° - 180°
Bending radius (R)	28mm - 294 mm	200 mm - 5100 mm
Minimum R/D ratio	1,3D	1,5D
Max. pipe length	6000 or 12000 mm	12500 mm

- Beveling, tapering of pipe ends
- Inspection and final documentation
- Packaging and shipping of finished products
- Mechanical tests (tensile, impact, hardness, corrosion...)
- Non-destructive testing (UT, MT, PT, ...)
- Hydraulic testing

To complete its various services, Fives Nordon has an **integrated inspection department** and a **COFRAC 17025-certified mechanical testing laboratory** adapted to your needs.

This form is not a contractual document. The information mentioned in this sheet is given for information purposes only and does not engage our responsibility.



For more information

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