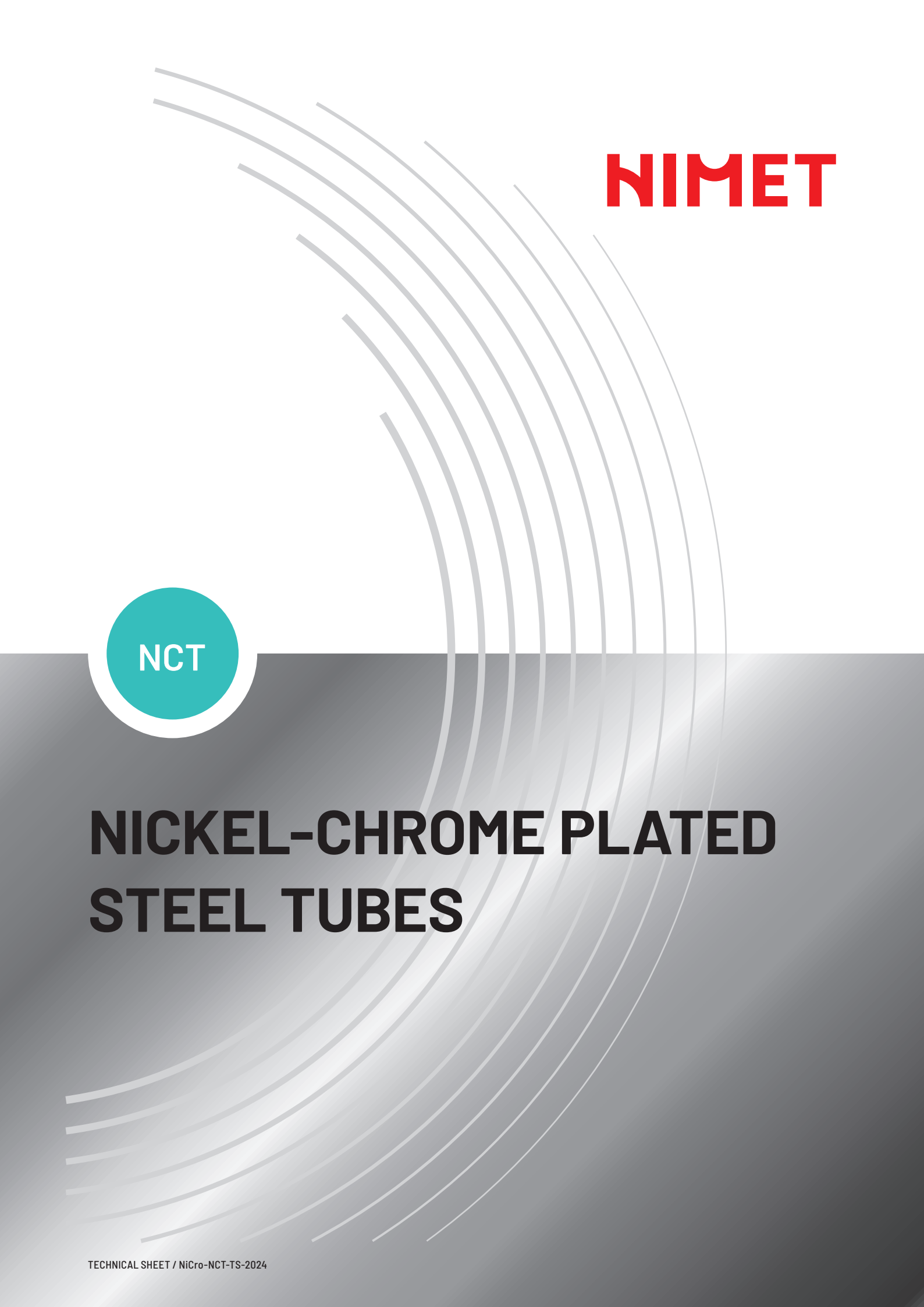




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NICKEL-CHROME PLATED STEEL TUBES

NICKEL-CHROME PLATED STEEL TUBES

NiCro NCT

E355+SR | P460N+N | 20MnV6

In spite of the well known oxidation resistance, chrome plating has its limitations when exposed to aggressive environments. Our solution in this case is nickel-chrome plating, a process meant to give products more durability even in high salinity, high humidity and heavy polluted environments. The tubes are replacing the solid piston rods in systems where the total weight needs to be minimized.

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● STEEL GRADES CORRESPONDENTS

EN	Werkstoff	DIN	B.S.	UNI	JIS	GOST	AISI / SAE / ASTM
E355	1.0580	St52	CFS5	Fe510	STKM19A	St6sp	1524 / 1024
P460N	1.8905	StE460	55C	FeE460KG	-	18G2AF	-
-	1.5217	20MnV6	55M	-	-	-	A572

● CHEMICAL COMPOSITION - IN % BY WEIGHT

Steel grade	C	Si	Mn	P	S	Cr	Mo	Ni	V	Cu	N
E355	max. 0.22	max. 0.55	max. 1.60	max. 0.025	max. 0.025	-	-	-	-	-	-
P460N	max. 0.20	max. 0.60	1.00 ÷ 1.70	max. 0.025	max. 0.020	max. 0.30	max. 0.10	max 0.80	max. 0.20	max. 0.70	max. 0.020
20MnV6	0.16 ÷ 0.22	0.10 ÷ 0.50	1.30 ÷ 1.70	max. 0.035	max. 0.035	-	-	-	0.08 ÷ 0.20	-	-

⁽¹⁾ Cr+Mo+Ni = max. 0.63

● MECHANICAL PROPERTIES

Steel grade	Tensile strength	Yield point	Elongation (longitudinal)	Impact energy (longitudinal direction)	Hardness ⁽³⁾	Norm
	R _m N/mm ²	R _{p0.2} N/mm ²	A ₅ %	KV ₂ J	Brinell N/mm ²	
E355+SR	min. 580	min. 450	min. 10	(min. 27J / -20°C) ⁽²⁾	min. 175	EN 10305-1
P460N+N	560 - 730	min. 460 ⁽¹⁾	min. 19	min. 40J / -20°C	170 - 220	EN 10216-3
20MnV6+N	550 - 800	min. 450	min. 20	min. 27J / -20°C	165 - 240	Technical data according to internal norm

SR = stress-relieved, N = normalized, C = cold drawn

⁽¹⁾ Wall thickness ≤ 12 mm

⁽²⁾ On request

⁽³⁾ The hardness values is for information only

⁽⁴⁾ The Yield Point value is for information only

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Outside diameter - OD	Ø30 - 140 mm
Inside diameter - ID	see standard dimensions range
Outside tolerance - OD	ISO f7 / ISO f8 / other, on request
Roundness - OD	max. 1/2 from diameter tolerance
Standard lengths	5000 - 6400 mm
Special lengths	On request we can offer cut to fix lengths pieces and special lengths up to max. 6.400 mm
Surface roughness - OD	Ra: max. 0.20 µm
	NiCro 150 NiCro 350 NiCro 500
Nickel layer thickness	min. 10 µm min. 20 µm min. 30 µm
Chrome layer thickness	min. 20 µm min. 20 µm min. 20 µm
Nickel layer microhardness	min. 300 HV0.1
Chrome layer microhardness	min. 900 HV0.1
Straightness	max. 0.25 mm / 1000 mm

● TABLE OF DIMENSIONS OD TOLERANCE

Diameter mm	ISO f7 µm	ISO f8 µm
18 < Ø ≤ 30	-20 / -41	-20 / -53
30 < Ø ≤ 50	-25 / -50	-25 / -64
50 < Ø ≤ 80	-30 / -60	-30 / -76
80 < Ø ≤ 120	-36 / -71	-36 / -90
120 < Ø ≤ 140	-43 / -83	-43 / -106

● STANDARD DIMENSIONS RANGE

Outside diameter mm	30	32	35	40	45	50	55	60	63	65	70	75	80	85	90	100	110	120	140
Inside diameter mm	15	16	25	20	25	30	35	40	43	45	50	55	60	65	70	80	90	100	120
	20	20	20	25	30	35	40	45	53	50	55	60	65	75	75	85	95	-	-
	-	-	-	30	35	40	45	50	-	55	60	65	70	-	80	90	-	-	-
Wall thickness mm	7.5	8	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	5	6	7.5	7.5	7.5	7.5	7.5	7.5	5	7.5	7.5	7.5	7.5	5	7.5	7.5	7.5	-	-
	-	-	-	5	5	5	5	5	-	5	5	5	5	-	5	5	-	-	-

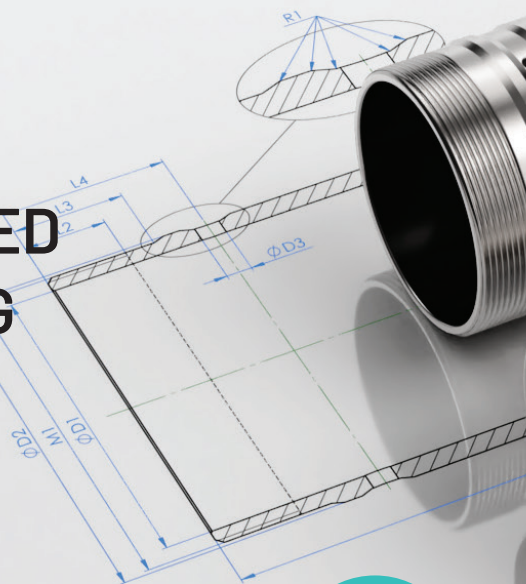


● CORROSION RESISTANCE LEVELS

Diameter mm	NiCro NCT	NSS	AASS
Ø30 - 140	NiCro 150	rating 10 after 500 h	rating 10 after 150 h
	NiCro 350	rating 10 after 1000 h	rating 10 after 350 h
	NiCro 500	rating 10 after 1500 h	rating 10 after 500 h

Tested in our own laboratory according to ISO 9227, evaluated according to ISO 10289.

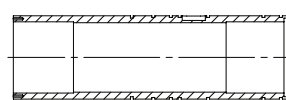
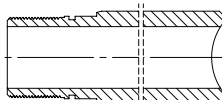
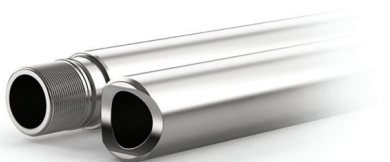
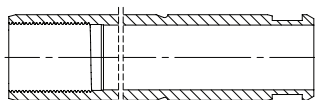
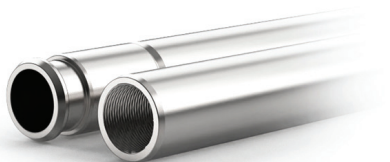
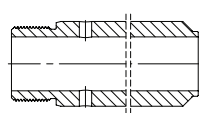
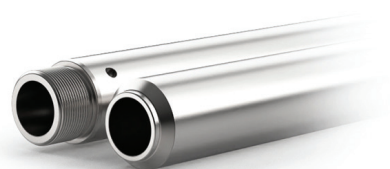
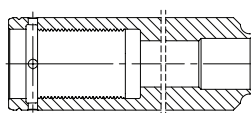
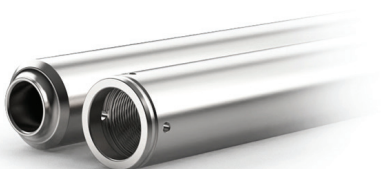
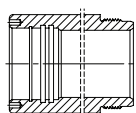
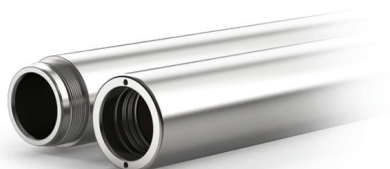
CUSTOMIZED MACHINING



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On request we can perform customized cutting and machining according to drawing. We work with the latest technology and our CNC machines can perform high quality turning, milling, threading and drilling.

Precision customized parts machined according with customer's drawings: chamfers, inner/outer radius, inner/outer threads, axial/radial holes, inner/outer grooves for seals.



PACKAGING

Plastic Sleeves

WHITE Plastic Sleeves

Ø16 .. 105 mm - Recyclable plastic sleeve.
For sizes less than 16 mm - plastic net,
aluminum bubble foil and wooden cases.

Cardboard Tubes

Chrome Plated Steel Bars and Tubes
RED striped tubes

Induction Hardened and Chrome Plated
Steel Bars and Tubes
BLUE striped tubes

Nickel-Chrome Plated Steel Bars and Tubes
Induction Hardened and Nickel-Chrome Plated Steel Bars and Tubes
GREEN striped tubes

Marking on the cardboard tube or on the plastic sleeve:

Product Code - Diameter - Tolerance - Chrome layer - Material - Heat Number - Calendar Week/Year - www.nimet.ro
NIMAX 200-CB125f7 - 20µm - C45E - 479455 - 45/2023 - www.nimet.ro

STORAGE & HANDLING

RECOMMENDATIONS



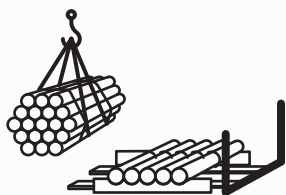
Keep the products stored in dry
and covered spaces.



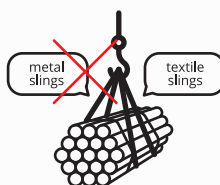
Do not expose the bars or tubes for a
long time to the sunlight or to very low
temperatures.



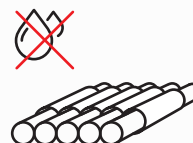
Direct contact with the floor and steel
supports that are not lined with soft
materials must be avoided; preferable to
use rubber or wood lined supports.



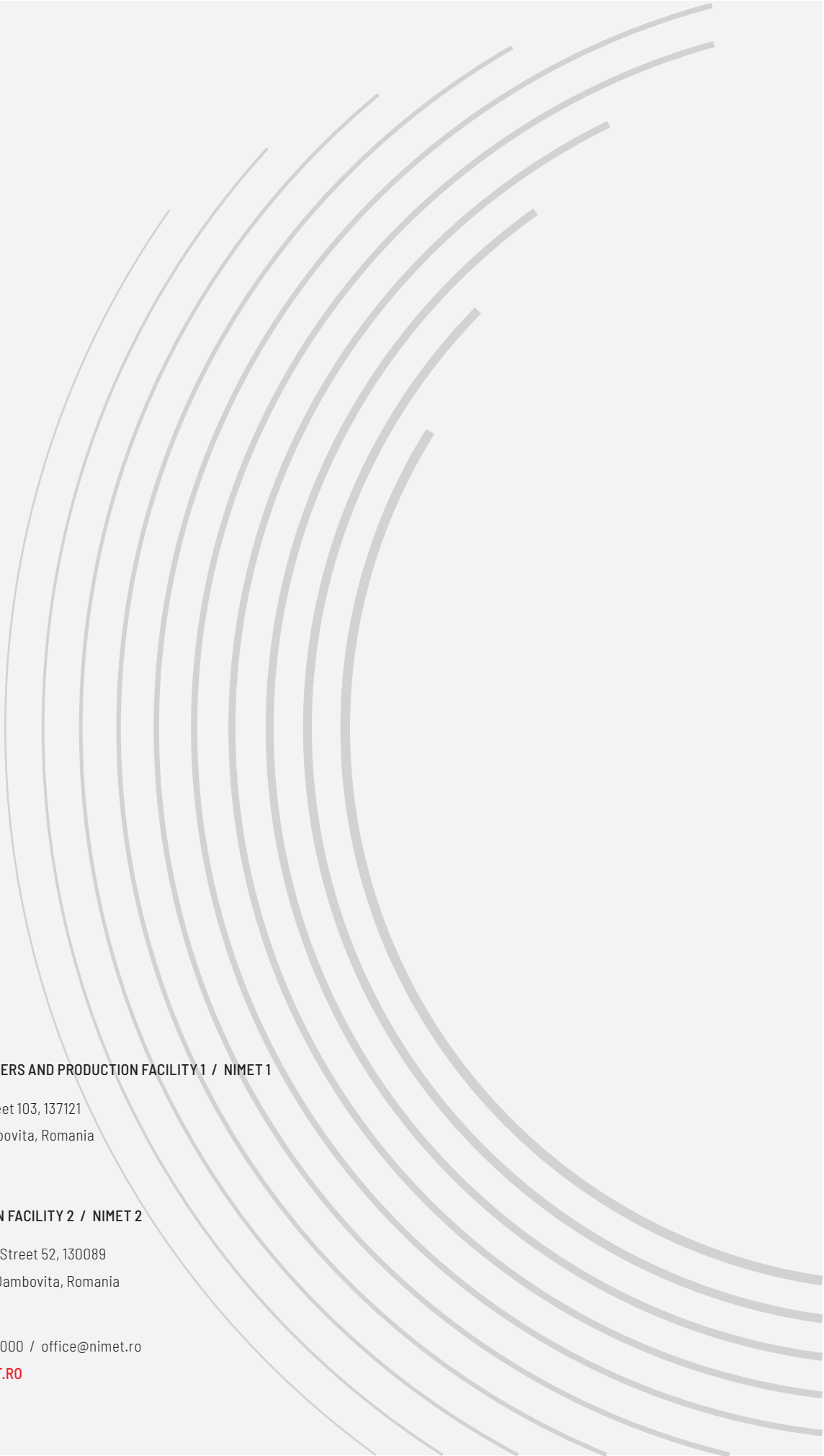
Whenever possible, please use the crane
to load or unload the bundles; when
using the fork lift please avoid the direct
contact of the forks with the products.



Always lift the bundles using textile
slings. Do not use metal slings during
handling of bundles.



Always keep dry the cardboard tubes
that protect the chromed products.



NIMET srl

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