



**SHANGHAI
ENP**



IN PARTNERSHIP
WITH THE
ENVIRONMENT



NICKEL PLATED STEEL

The combination of corrosion resistance, strength, conductivity, cost effectiveness, and compatibility with electrochemical environments makes nickel plated steel a widely used material for battery casings.

FOR CLEAN ENERGY SOLUTIONS

I Company Profile

II Technology

III Intelligent Factory

IV Products

V Solutions





Company Profile



The partnership of Shanghai ENP and Jiangsu Vigorous Metal integrates R&D, production and sales of nickel plated steel products. The current production line has an annual capacity of 60,000 tons of nickel plated steel coils.

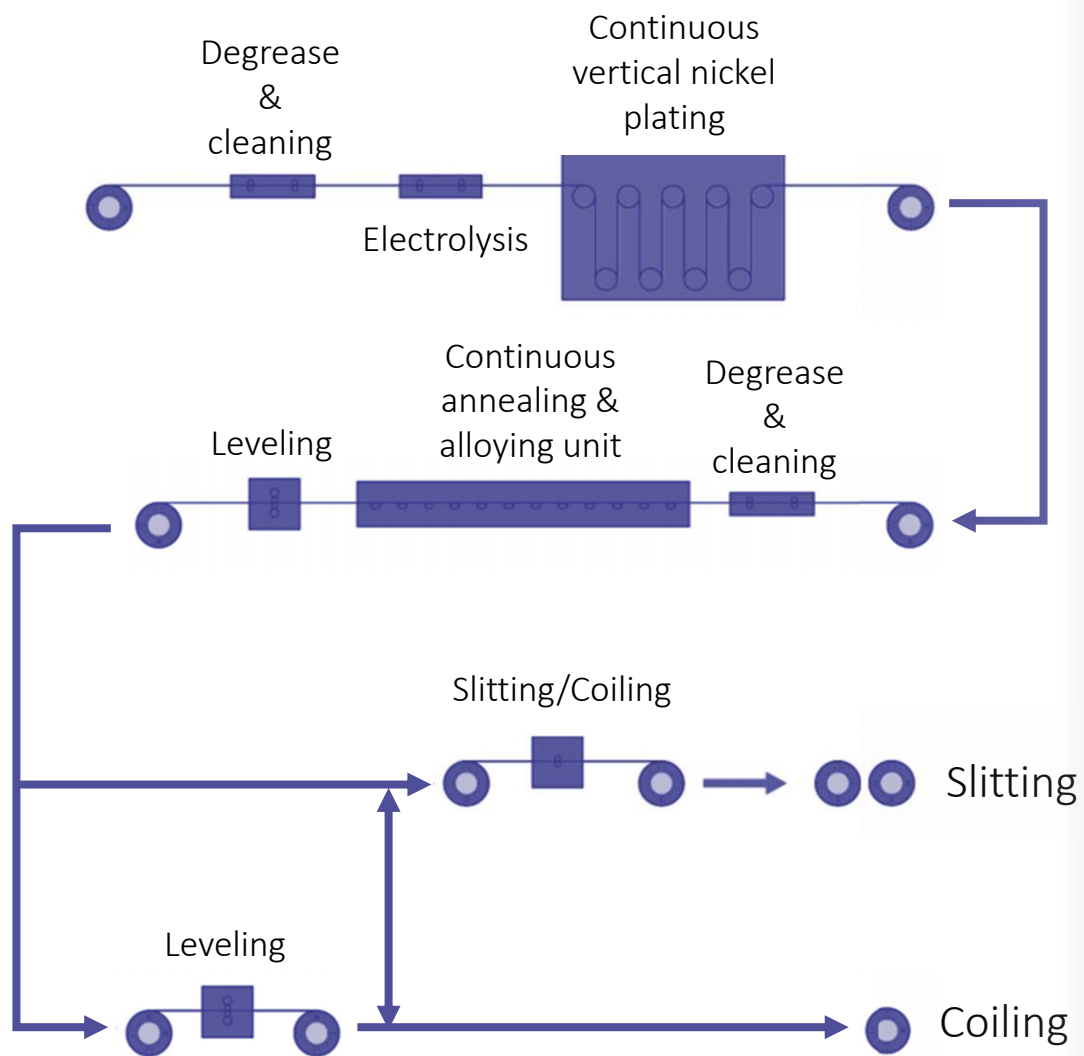
FUTURE ANNUAL OUTPUT
OF 300,000 TONS

Plans are in place for a new intelligent factory with an annual output of 300,000 tons of nickel plated steel coils for new energy battery casings. The total investment is about 2 billion RMB, and will cover an area of 233 acres, which includes about 185,000 square meters of factory and office buildings.

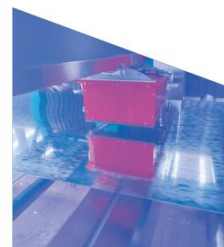
RMB 2 BILLION
INVESTMENT

The intelligent factory will be equipped with high-speed continuous vertical nickel plating, continuous annealing and alloying unit, leveling, coiling and slitting.





Shanghai ENP continues to promote technology innovation, using advanced technologies such as automate detection, digital twin image recognition, MES system, ERP system and artificial intelligence. The realization of intelligence with automation of the entire process and to build a reliable smart factory to service our valued customers.



Online
Thickness
Measurement



ERP System



Image
Recognition



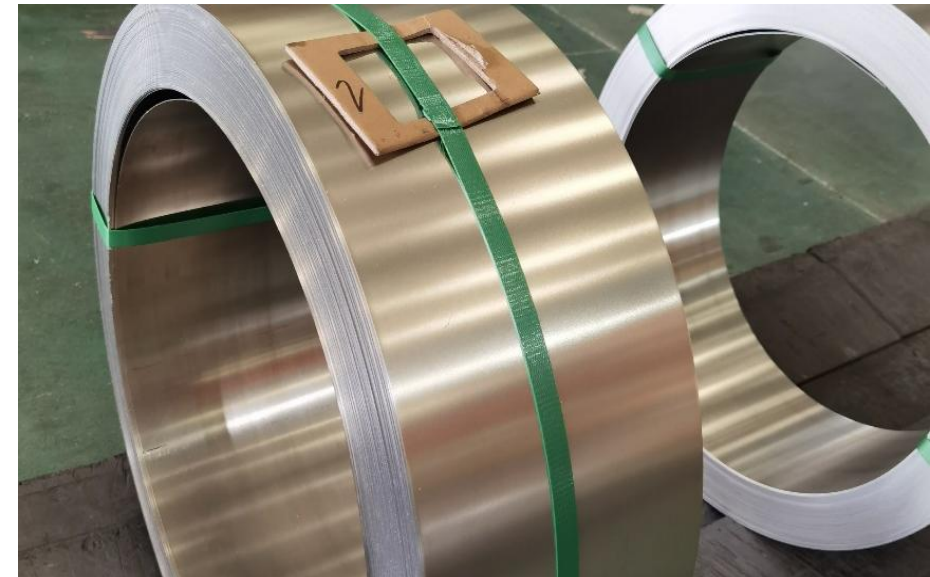
Automatic
detection

ITEM	NICKEL-PLATED STEEL STRIP
• Steel Types	• DCKE+NF (Substrate IF, CQ-T1,CQ-T4, etc.)
• Steel Thickness	• 0.20 - 1.5mm
• Steel Strip Width	• 700mm-1250mm (slitted according to customer requirements)
• Inner diameter of coil	• $\phi 610\text{mm}$ or $\phi 508\text{mm}$
• Coil unit weight	• 6 – 22 MT
• Thickness of double-sided nickel plating	• 0 - 10 μm /0 - 10 μm , uniform or differential thickness available
• Production capacity	• 300,000 MT/annual
*** Customization is available to requirements.	



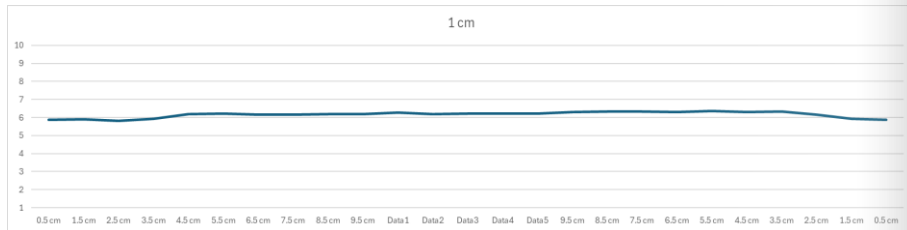
Nickel-Plated Steel Coil

Slitted Nickel – Plated Steel Strip

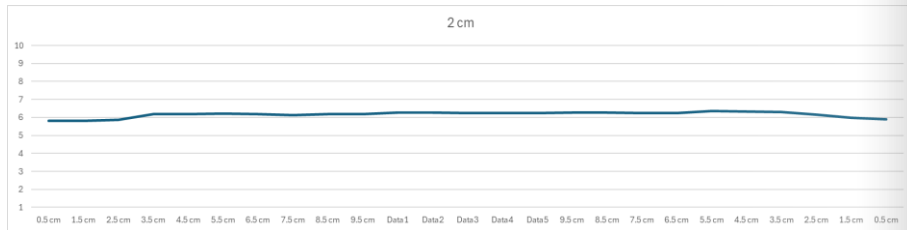


SPACING	FROM THE OPERATIONAL EDGE										MIDDLE OF PLATE					FROM THE DRIVE SIDE EDGE									
	0.5 cm	1.5 cm	2.5 cm	3.5 cm	4.5 cm	5.5 cm	6.5 cm	7.5 cm	8.5 cm	9.5 cm	Data 1	Data 2	Data 3	Data 4	Data 5	9.5 cm	8.5 cm	7.5 cm	6.5 cm	5.5 cm	4.5 cm	3.5 cm	2.5 cm	1.5 cm	0.5 cm
1 cm	5.87	5.91	5.81	5.92	6.2	6.23	6.17	6.16	6.18	6.19	6.28	6.2	6.21	6.21	6.21	6.29	6.34	6.34	6.3	6.35	6.31	6.33	6.17	5.94	5.88
2 cm	5.82	5.8	5.86	6.18	6.18	6.21	6.18	6.12	6.18	6.18	6.27	6.28	6.23	6.23	6.25	6.28	6.27	6.25	6.23	6.37	6.33	6.31	6.15	5.99	5.89
3 cm	5.8	5.81	5.89	6.15	6.12	6.25	6.18	6.12	6.17	6.18	6.27	6.28	6.27	6.27	6.24	6.28	6.31	6.26	6.23	6.38	6.41	6.33	6.28	5.03	5.89

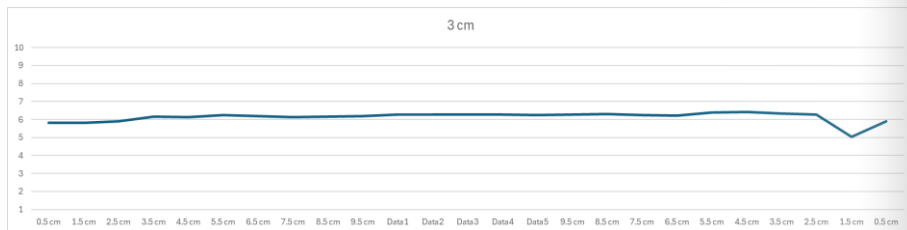
1 cm



2 cm



3 cm



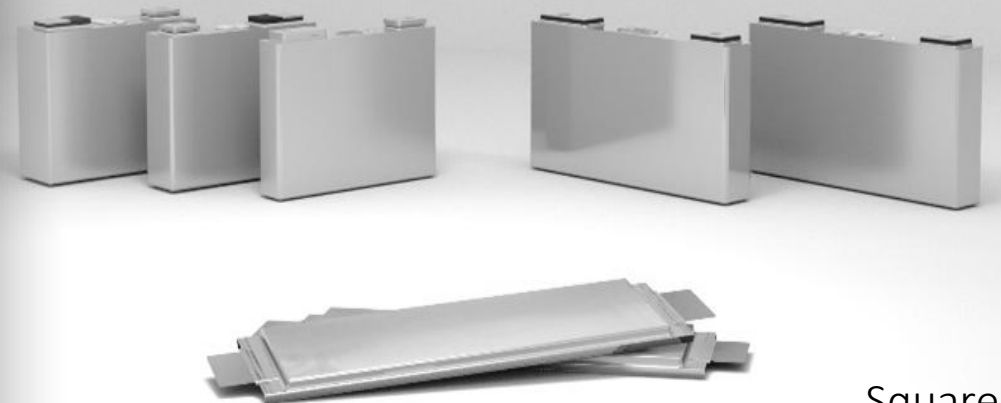
Thickness (μm)	Mass (g/m ²)
0.5/0.5 ~ 10	4.45/4.45 ~ 89
1.0/0.5 ~ 10	8.9/4.45 ~ 89
2.0/0.5 ~ 10	17.8/4.45 ~ 89
3.0/0.5 ~ 10	26.7/4.45 ~ 89
3.5/0.5 ~ 10	31.15/4.45 ~ 89
4.0/0.5 ~ 10	35.6/4.45 ~ 89
5.0/0.5 ~ 10	44.5/4.45 ~ 89
6.0/0.5 ~ 10	53.4/4.45 ~ 89
7.0/0.5 ~ 10	62.3/4.45 ~ 89
8.0/0.5 ~ 10	71.2/4.45 ~ 89
9.0/0.5 ~ 10	80.1/4.45 ~ 89
10.0/0.5 ~ 10	89/4.45 ~ 89

Capable of achieving any uniform or differential plating thickness within the range of 0.5 ~ 10μm, typical plating thickness

BATTERY CASES	BLADE SERIES	SQUARE SERIES	18, 21 CYLINDRICAL SERIES	46 CYLINDRICAL SERIES
Cell Structure Design	The blade battery case serves as the positive electrode, with artificial graphite as the negative material.	Steel casing encapsulates the positive electrode at the mouth; the body can serve as the negative electrode or for carrying, using laser welding for sealing.	Steel casing features a rotating seal at the mouth for the positive cover; the casing body acts as the negative electrode.	Steel casing has a punched round hole at the bottom to lead out the positive electrode; the casing body serves as the negative electrode; options for laser welding or rotary sealing.
Steel Case Dimensions	960*90*13.5mm	Various sizes available	$\phi 18H65$ $\phi 21H70$	$\phi 46H80, 95, 100$
Raw Material Thickness	0.3mm ~ 0.5mm	0.20mm ~ 0.30mm	0.18 ~ 0.25 mm 0.25 ~ 0.40mm	0.35 ~ 0.45mm 0.50 ~ 0.80mm
Stamping Process	Manufacturing process involves multi-roller pressing or stamping equipment for single-stage forming and welding.	Multi-stage stamping processes	Multi-stage stamping processes	Multi-stage stamping processes



Blade Series



Square Series



Cylindrical Series

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www.enp-china.com



terry@enp-china.com
+86 13916132384

Suite 903-905, Building B, Lanyun Culture Center, Lane 899, Panlong Rd., Qingpu, Shanghai

THANK
YOU
FOR
YOUR
TIME