Commercial Proposal No. CP-2026/SPECIAL/SHEETPILE

Global Procurement of Special Steels, Larssen Sheet Piling & Structural Metal Products from China — Industrial, Port & Energy Infrastructure

---

From: Metal-Asia (metal-asia.pw) — Direct-source special steel procurement with full metallurgical compliance
To: Steel fabricators, construction companies, port operators, energy contractors, heavy equipment manufacturers
Date: April 2026
Format: B2B — Project and tonnage supply with full mill certification and inspection

---

1. Executive Summary — Special Steel Procurement with Metallurgical Accountability

Six years in the special steel segment has confirmed one reality: 80% of market participants are trading companies without metallurgical competency. They cannot distinguish S355J2H from S355J0H, do not understand the implications of impact toughness at 0°C vs. –20°C, and cannot explain why weld joints crack in your structure.

Metal-Asia delivers mill-direct procurement with full metallurgical traceability: from grade selection through welding procedure consultation and heat treatment advisory. Every heat is verified. Every certificate is authenticated.

View special alloys catalog

---

2. Larssen Sheet Piling — Retention, Excavation & Shore Protection

2.1. Engineering Applications

Sheet piling is not merely a steel profile. It is an engineered retaining system that enables:

- Retaining walls to 25 m depth without ground disturbance
- Dry excavations in saturated soils with high groundwater
- Shoreline protection against erosion and landslip
- Quay walls, piers, and port structures
- Foundation reinforcement on weak soils

2.2. Technical Specification — Larssen Sheet Piles

U-Type Profiles (Hot-Rolled, Standard)

Profile	Width, mm	Height, mm	Wall Thickness, mm	Mass, kg/m	Moment of Inertia, cm⁴/m	Section Area, cm²/m	Steel Grade
U-III (SP-III)	400	125	13.0	60.0	1,680	76.4	S355J2H / S355GP
U-IV (SP-IV)	400	170	15.5	76.1	3,860	96.9	S355J2H / S355GP
U-V (SP-V)	420	180	18.0	105.0	5,900	134.2	S355J2H / S355GP
U-VI (SP-VI)	420	220	22.0	155.0	11,200	198.0	S355J2H / S355GP
U-II (SP-II)	400	100	10.5	48.0	850	61.2	S275J2H
U-I (SP-I)	400	75	8.0	35.5	390	45.2	S275J2H

Z-Type Profiles (Enhanced Stiffness, Deep Excavations)

Profile	Width, mm	Height, mm	Wall Thickness, mm	Mass, kg/m	Moment of Inertia, cm⁴/m	Section Area, cm²/m	Steel Grade
Z-II	630	230	12.0	96.0	7,800	121.5	S355J2H / S355GP
Z-III	630	265	14.0	124.0	13,400	157.0	S355J2H / S355GP
Z-IV	630	300	16.0	155.0	20,500	196.0	S355J2H / S355GP
Z-V	630	330	18.0	188.0	29,000	238.0	S355J2H / S355GP
Z-VI	630	360	20.0	225.0	39,500	285.0	S355J2H / S355GP
Z-VII	630	400	22.0	270.0	53,000	342.0	S355J2H / S355GP

S-Type & Flat Sheet Piles

Profile	Width, mm	Height, mm	Thickness, mm	Mass, kg/m	Application	Steel Grade
S-430	630	265	11.0	98.5	Deep excavations, waterproofing	S355J2H
S-530	630	300	13.0	132.0	Port structures, embankments	S355J2H
FSP-IA	900	—	8.6	76.0	Temporary works, drainage	S275J2H
FSP-IIA	900	—	11.2	99.0	Low-height retaining walls	S275J2H
FSP-III	900	—	13.0	115.0	Standard universal profile	S355J2H
FSP-IV	900	—	15.5	137.0	Heavy retaining walls	S355J2H

Sheet piling with delivery

2.3. Steel Grades for Sheet Piling

Grade	Standard	Yield Strength, MPa	Impact Toughness	Application
S275GP	EN 10248	275	27 J at 0°C	Temporary works, non-aggressive soils
S355GP	EN 10248	355	27 J at 0°C	Standard retaining walls, excavations
S355J0H	EN 10219	355	27 J at 0°C	Heavy structures, industrial foundations
S355J2H	EN 10219	355	27 J at –20°C	Arctic, offshore, permafrost conditions
S390GP	EN 10248	390	27 J at 0°C	Deep excavations, impact loads
S430GP	EN 10248	430	27 J at 0°C	Quay crane walls, heavy-duty loads
MDB350	JIS A 5528	355	27 J at 0°C	Asian projects, JIS compliance
MDB390	JIS A 5528	390	27 J at 0°C	Heavy Japanese profiles
SY295	JIS A 5523	295	—	Standard Japanese sheet pile

Grade	Standard	Yield Strength, MPa	Impact Toughness	Application
SY390	JIS A 5523	390	—	Heavy Japanese sheet pile

Engineering recommendation: For climates with winter temperatures below –20°C, specify **S355J2H exclusively**. The 5–8% cost saving of S355GP will be eliminated by the first winter crack.

2.4. Chemical Composition — S355J2H for Sheet Piling

Element	Content, %	Metallurgical Function
Carbon (C)	≤ 0.22	Base strength; weldability control
Manganese (Mn)	≤ 1.60	Strength and toughness
Silicon (Si)	≤ 0.55	Deoxidation; surface quality
Phosphorus (P)	≤ 0.030	Cold-brittleness minimization
Sulfur (S)	≤ 0.030	Welding defect prevention
Vanadium (V)	≤ 0.15	Grain refinement
Niobium (Nb)	≤ 0.05	Hot-forming improvement
Titanium (Ti)	≤ 0.20	Nitrogen fixation; aging prevention

2.5. Grade Comparison — S355J2H vs. S355J0H vs. S355GP

Parameter	S355J2H	S355J0H	S355GP
Yield strength	355 MPa	355 MPa	355 MPa
Tensile strength	510–680 MPa	510–680 MPa	490–630 MPa
Impact toughness KV	27 J at –20°C	27 J at 0°C	27 J at 0°C
Climate applicability	Full global range (including Arctic)	Temperate, to –10°C	Temporary structures only
Premium vs. S355GP	+10–12%	+5–7%	Baseline
Recommendation	**All permanent structures**	Southern climates	Temporary works only

2.6. Sheet Piling Accessories

Item	Function	Dimensions
Interlock (hinged)	Sheet pile joint connection	For all U/Z/S profile types
Welded waler beam	Horizontal bracing between walls	IPE 200–450, UPN 240–400

Item	Function	Dimensions
Anchor rod	Sheet pile to anchor plate connection	Ø32–50 mm, steel 40Cr, Class 8.8
Anchor plate	Load distribution for anchor rods	Plate 600×400×20, S355
Pile cap	Uniform crane load distribution	Double channel UPN 240–300
Interlock sealant	Joint waterproofing	EPDM profile, oakum
Connector	Length extension for different pile lengths	Manufacturer-specific

Special alloys catalog

---

3. Structural Steel — General Purpose Grades

3.1. Hot-Rolled Plate

Grade	Standard	Thickness, mm	Yield Strength, MPa	Application	HS Code
S235JR	EN 10025	3–200	235	General construction	7208
S275JR	EN 10025	3–200	275	Beams, columns, bracing	7208
S355JR	EN 10025	3–200	355	Load-bearing structures, bridges	7208
S355J2+N	EN 10025	5–250	355	Impact-resistant at –20°C	7208
Q235B	GB/T 700	3–200	235	Chinese S235JR equivalent	7208
Q345B/Q355B	GB/T 1591	3–250	345–355	Chinese S355JR equivalent	7208
Q345D/Q355D	GB/T 1591	3–250	345–355	Chinese S355J2 equivalent (–20°C)	7208
A36	ASTM A36	3–200	250	US standard construction	7208
A572 Gr.50	ASTM A572	4–200	345	US S355 equivalent	7208

3.2. Structural Hollow Sections

Grade	Standard	OD, mm	Wall Thickness, mm	Application	HS Code
S235JRH	EN 10219	21.3–508	2.0–12.7	General structures	7306
S275J0H	EN 10219	21.3–508	2.0–12.7	Beams, columns	7306
S355J0H	EN 10219	21.3–508	2.0–12.7	Load-bearing structures	7306
S355J2H	EN 10219	21.3–508	2.0–12.7	Impact-resistant structures	7306
S355NH/NLH	EN 10210	21.3–610	2.5–40	High-load tubes, –20°C to –50°C	7306
ST37-2	DIN 2395	10–100	1.0–6.0	Precision structures	7306
ST52-3	DIN 2395	10–100	1.0–6.0	High-strength structures	7306

3.3. Round & Square Bar

Grade	Standard	Size, mm	Application	HS Code
S235JR	EN 10025	Round 10–300, Square 10–150	Reinforcement, ties, bolts	7214
S275JR	EN 10025	Round 10–300	Shafts, axles, spindles	7214
S355JR	EN 10025	Round 30–400, Square 20–200	Crankshafts, gears	7214
C45 (1.0503)	EN 10083	Round 10–500	Shafts, bushings, gears	7214
C40 (1.0511)	EN 10083	Round 10–400	Medium-duty machine parts	7214
40Cr	GB/T 3077	Round 10–300	Gear shafts, spindles, cams	7214
45 (St45)	GB/T 699	Round 10–300	Axles, bolts, general engineering	7214
20 (St20)	GB/T 699	Round 10–250	Carburized parts, bushings	7214

3.4. Structural Sections (I-Beams, Channels, Angles)

Section	Standard	Sizes	Grades	HS Code
I-beam (IPE/HEA/HEB/HEM)	EN 10034	IPE 80–600, HEA 100–1000	S235JR, S275JR, S355JR, S355J2	7216
Wide flange (HL/HD)	EN 10034	HL 920–1100, HD 360–400	S355J2, S460M	7216
Channel (UPN/UPE)	EN 10279	UPN 50–400, UPE 80–400	S235JR, S275JR, S355J2	7216
Equal angle	EN 10056	L 20×20×3 – L 250×250×28	S235JR, S275JR, S355J2	7216
Unequal angle	EN 10056	L 30×20×3 – L 200×150×18	S235JR, S275JR, S355J2	7216
Cold-formed channel	EN 10162	Height 30–400, thickness 1.5–8	S235JRC, S350GD	7216

Black steel catalog

---

4. Supply Chain Risk Management — Special Steel Procurement

Risk 1: Grade Substitution

Mitigation: Triple verification: (1) MTC with heat number; (2) Independent spectral analysis by Intertek before shipment; (3) Re-test at destination laboratory if required. Full refund + compensation on non-conformance.

Risk 2: Substandard Mechanical Properties

Mitigation: Contractually specified values: yield strength ≥ 355 MPa, impact toughness ≥ 27 J at –20°C. Every batch with tensile + Charpy test report.

Risk 3: Dimensional Non-Conformance

Mitigation: ISO 9001 mills with Class A tolerances only. Pre-shipment inspection with caliper and micrometer checks on 10% of coils/profiles.

Risk 4: HS Code Misclassification

Mitigation: Pre-shipment Binding Tariff Information (BTI) per SKU. Correct classification saves 2–5% in duty costs. Larssen sheet piling: typically **7301.10** or **7308.90** depending on profile and end use.

Risk 5: Extended Lead Times

Mitigation: Stockholding program at Rotterdam hub for standard grades S355J2H, S235JR, U-IV sheet pile. Delivery from stock: 7–14 days vs. 60–75 days mill-order.

Risk 6: Hidden Charges

Mitigation: Fully transparent pricing: FOB mill cost + freight + insurance + customs duty + VAT + delivery to your facility. No "storage fees," no "expediting charges."

Shipping & logistics calculator

---

5. Terms of Supply

Parameter	Terms
Incoterms 2020	FOB Qingdao/Shanghai/Tianjin, CIF Rotterdam/Hamburg/Singapore
MOQ	20 MT (sheet pile from 10 MT by arrangement)
Payment	30% deposit, 70% against documents
Lead time	20–35 days (standard), 45–60 days (non-standard sizes)
Certification	MTC EN 10204 3.1/3.2, independent Intertek inspection
Packing	Steel strapping, wooden skids, VCI anti-corrosion treatment
Insurance	110% of CIF value

Indicative Pricing (FOB Qingdao, April 2026):

Product	Price/MT, USD
Larssen U-IV, S355J2H	680–750
Larssen U-V, S355J2H	720–800
Larssen Z-III, S355J2H	750–850
Plate S355J2+N, 10–20 mm	560–620
Plate S355J2+N, 20–50 mm	580–640
Tube S355J2H, Ø219×8	620–700
Tube S355J2H, Ø325×10	640–720
I-beam HEA 200, S355JR	580–650
I-beam HEB 300, S355JR	600–670
Round bar C45, Ø50–100	620–720
Round bar 40Cr, Ø50–100	720–850

Plates & coils catalog

---

6. Why Metal-Asia — Comparison Matrix

Criterion	Metal-Asia	Typical Trading Company	Direct China Mill Order
Pricing	Mill price + 5–8% margin	Mill price + 15–30%	Mill price, but risk on buyer
Quality inspection	Intertek included	None available	+3,000–5,000 USD extra
Customs clearance	Full compliance support	Partial or none	Buyer assumes all risk
Warranty	24 months	None	Factory-only (difficult to claim)
Language support	English, 24/7	Business hours only	Through translator only
Grade range	Full EN/ASTM/JIS/GB range	Popular grades only	Mill's own production only

Structural steel catalog

Yours sincerely,
Metal-Asia Special Steels Division
metal-asia.pw — Mill-Direct | Full Certification | Global Delivery

Home | Blog | Contact | Payment

SEO Clusters: Larssen sheet pile price, sheet piling supplier, S355J2H steel tube, special steel procurement, black steel metal products, I-beam S355, structural steel plate, rapid-build steel structures, port construction steel, sheet pile retaining wall, C45 round bar, 40Cr steel, Q345B steel, hot rolled coil, construction steel from China, EN 10025 steel, global steel sourcing.