

Structural-Steel Section Rolling Mill

Complete Turnkey Business Proposal



Made-in-China supplier reference: real structural-steel section rolling mill equipment.

bankable study investment gate	confirmed feedstock supply gate	EPC scope delivery gate	quality laboratory release gate
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Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

Strategic section-rolling manufacturing that heats billets, rolls angles, channels, bars or specified structural sections, cools, straightens, cuts, inspects and dispatches certified steel products.

Why this project fits Afghanistan

- This is a strategic plant, not a low-entry equipment package.
- Bankable feedstock, utility, permit, market, EPC and financing evidence is required before selection.
- Operate only with an independent laboratory, defined quality release and preventive-maintenance program.

Sanaatchi delivery scope

- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

Proceed only after bankable billet or scrap/EAF route, heavy power/fuel and water, standards certification, rolling-pass design, off-take for specified sections, environmental permits, rail/road logistics and experienced mill EPC/operator support are confirmed.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Rolled structural-steel sections	Steel grade, billet chemistry, section geometry, length, straightness, mechanical properties, tolerances, marking and bundling	Construction contractors, fabricators, infrastructure works, warehouses, transmission projects, distributors and regional steel markets

Final capacity, process, resource quality, utilities, permit conditions, emissions, acceptance test and commercial terms require independent engineering review before any order.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Billet receiving/reheating furnace	Heats feed for rolling	Chemistry and temperature
2	Roughing/intermediate stands	Reduces and shapes steel	Pass design and load
3	Finishing stands and cooling bed	Produces final section	Dimensions and cooling
4	Straightening/cut/bundle line	Prepares dispatch lengths	Straightness and weight
5	Metallurgy laboratory/inspection	Releases certified sections	Grade and mechanical properties

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Made-in-China supplier reference: real structural-steel section rolling mill equipment.



Made-in-China supplier reference: second real machine configuration for structural-steel section rolling mill.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Certified billets or qualified steel feed, roll sets, refractories, furnace fuel/electricity, cooling water/treatment chemicals, lubricants, packaging/straps, spares and laboratory consumables

Utilities & infrastructure

- Bankable electricity/fuel/water plans, process cooling and treatment, plant fire safety, laboratory, covered stores and qualified operation team
- Environmental permits, emissions control, waste route, maintenance workshop, critical spares and site-specific safety systems

Quality, safety and environmental controls

- Validate feed chemistry, energy price/reliability, furnace emissions, cooling water, product standards, section demand, rail/road logistics and technical operator before commitment
- Control billet temperature, rolling reductions, pass wear, section dimensions, cooling, straightening, cut length, surface defects and bundle identity
- Test chemical composition, tensile/yield properties, dimensions, mass, straightness, surface defects, marking and certification requirements

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

A rolling mill requires dependable billet economics, high utility reliability and tested standards compliance. It should be selected only against confirmed section demand and realistic off-take.

Component	Indicative range	Notes
Billet yard, reheat furnace and roughing mill	US\$120m-400m	Feed and rolling capacity
Finishing stands, cooling, cut and bundle line	US\$80m-280m	Section portfolio and automation
Utilities, laboratory, emissions and installation	US\$55m-190m	Power/water/compliance critical
Indicative strategic project total	US\$255m-870m	Steelmaking, land, finance and working capital excluded

Implementation sequence

Phase 1	2-5 weeks	Confirm product specification, representative raw material, buyer, capacity, site and utilities
Phase 2	3-7 weeks	Run supplier trials with the buyer material and freeze the balanced machine, tooling and utility scope
Phase 3	8-22 weeks	Manufacture or refurbish, inspect, document and ship the contracted equipment
Phase 4	3-12 weeks	Install, commission, train operators and pass material-specific acceptance tests

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

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Research and image references

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