FOOTHILLS STEEL

AREMA MANGANESE TRACKWORK CASTINGS

RAILWAY FROGS

AUSTENITIC MANGANESE. MACHINED AND INSPECTED IN CALGARY.

Rail-bound manganese (RBM) frog inserts and trackwork castings to AREMA Plan 100, Section M2, in ASTM A128 Grade A manganese steel. Every frog is serialized, radiographed to plan, profile-machined to drawing in our Calgary shop and depth-hardened before it ships.

A128 Gr. A	AREMA M2	RT to Plan	100%
AUSTENITIC MANGANESE STEEL, 12% MN MIN.	PLAN 100 MANGANESE CASTINGS, HIGH INTEGRITY PER M2.5.4	LEVEL 2 X-RAY PER AREMA SPEC	SERIALIZED WITH FULL TRACEABILITY

WORK-HARDENING MANGANESE

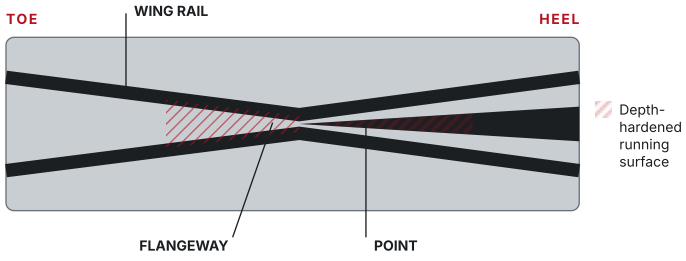
Austenitic manganese steel hardens under wheel impact while the core stays tough, so the running surface gets harder in service instead of breaking down.

MACHINED TO DRAWING

Frog inserts are profile-machined in Calgary on our dedicated frog machining setup, then CNC-probed against the drawing with a dimensional report for every serial number.

DEPTH-HARDENED RUNNING SURFACES

Running surfaces are explosion depth-hardened after machining, so the frog goes into track already hardened instead of work-hardening the hard way.



BUILT TO THE AREMA MANUAL

Castings are produced to AREMA Manual for Railway Engineering Portfolio Plan 100, Section M2, and the latest AREMA issue referenced on your purchase order. High-integrity castings meet M2.5.4, and visual acceptance follows M2.5: free of hot tears, cracks, cold shuts and other injurious defects.

Schematic only, not to scale. Frog geometry, rail section and hardened zones follow the customer drawing.

WHAT WE SUPPLY

FROG INSERTS AND TRACKWORK CASTINGS

- RBM frog inserts, including #9 and #11
- #15 frog castings for 136 lb rail
- Other manganese trackwork castings to customer drawing
- Raw castings or fully machined and hardened inserts
- Patterns and tooling maintained for repeat orders

HOW WE WORK

YOUR DRAWING, OUR PROCESS

Send the frog drawing and revision. We plan the casting, issue an Inspection & Test Plan for the order, and hold first-article approval before production starts.

Castings are produced to our specification by qualified partner foundries, then machined, inspected, hardened and documented under Foothills control.

STAGE	WHAT IS CHECKED	RECORD
Casting	Heat chemistry to ASTM A128 Grade A; visual to AREMA M2.5; unique serial number on every casting	Heat analysis, visual report
Radiography	Radiographic testing (X-ray) to AREMA specification, Level 2 acceptance	RT report
Machining	Profile-machined to drawing in Calgary; critical features CNC-probed against the drawing	Dimensional report per serial number
Hardening	Running surfaces explosion depth-hardened after machining	Hardening record
Turnover	Final visual, marking, packaging and documentation review	Turnover package

MATERIAL

CHEMISTRY, WT%

ELEMENT	REQUIREMENT
Carbon	1.00 – 1.30
Manganese	12.0 min.
Silicon	1.00 max.
Phosphorus	0.07 max.

QUALITY & DOCUMENTATION

Each order ships with a turnover package traceable to the frog serial number.

Inspection & Test Plan · Heat chemistry · RT reports · Dimensional reports · Hardening records · Serial traceability

ISO 9001 · CSA W47.1 · COR · APEGA Permit

QUOTE RAILWAY FROGS

Send the frog drawing, revision and quantity. We'll confirm price, lead time and the inspection plan.

(403) 255-0125 · Fax (403) 252-8994
info@foothillssteel.ca
foothillssteel.ca

Typical data. Final requirements follow the purchase order and customer drawing.