

Structural Steel Material Takeoff Module

AISC · AWS D1.1 Standards · Powered by 30 Years of Steel Fabrication Expertise

1 AISC & AWS Standards Built In

Three approved knowledge bases encode AISC Steel Construction Manual requirements, AWS D1.1 Structural Welding Code, and material specifications from A36 through A992 — including W-shapes, HSS, channels, angles and miscellaneous metals.

2 Complete Section Type Coverage

Extracts W-shapes, HSS (square, rectangular and round), channels (C & MC), angles (single and double), plates and connection plates, handrail and posts, bar grating and floor plate, structural bolts and anchor rods.

3 Mark-by-Mark MTO Output

All MTO output organized by member mark with cut lengths, quantities, unit weights and total weights — matching how fabrication shops track and manage work in the shop and field.

4 Weight Summary & Tonnage

Generates total weight summaries by section type (W-shapes, HSS, angles, plates, etc.) with grand total tonnage — ready for subcontract pricing, freight estimates and bid summaries.

5 Surface Area Calculations

Calculates paint and coating surface area per member and in total — separating galvanizing SA from paint SA to support two distinct subcontract scopes. Galvanizing weight calculated per ASTM A123.

6 Grade & Specification Notes

Identifies and flags material grades per member (A36, A572-GR.50, A992, A500). Grade note row auto-generated below each section header. Galvanizing and coating specs carried through from drawing callouts.

7 Demolition Scope Extraction

Identifies and quantifies demolition steel from drawings — separating new fabrication scope from existing steel removal in a dedicated demolition section of the MTO report.

8 Smart Flagging System

Flags ambiguous dimensions, missing member marks, conflicting grades, unresolved connection details, and drawing quality issues — ensuring the estimating team reviews critical items before finalizing the MTO.

9 Professional PDF & Excel Output

Branded MineFab AI reports with SOW confirmation table, mark-by-mark MTO, weight summary by section type, surface area tables, galvanizing schedule, flag register, and approval block — plus a structured Excel MTO workbook for estimating.