

Steel Plant Maintenance Overhead Crane

Selection Checklist & Pre-Quotation Information Sheet

Use this checklist before requesting a quotation for a steel plant maintenance overhead crane. Check each item that has been confirmed and fill in the blank fields where applicable.

1. Load

- ☐ Maximum maintenance load: ____ t
- ☐ Average maintenance load: ____ t
- ☐ Lifting accessories included: ☐ Yes ☐ No
- ☐ Lifting accessories weight: ____ t
- ☐ Future maintenance load considered: ☐ Yes ☐ No
- ☐ Maximum load frequency: ____ lifts/day
- ☐ Load dimensions: ____ × ____ × ____ m
- ☐ Center of gravity / lifting points confirmed: ☐ Yes ☐ No

2. Dimensions

- ☐ Crane span: ____ m
- ☐ Lifting height: ____ m
- ☐ Required hook coverage: _____
- ☐ Highest hook position: ____ m
- ☐ Lowest hook position: ____ m
- ☐ Equipment height: ____ m
- ☐ Available headroom: ____ m
- ☐ Floor-to-runway elevation: ____ m
- ☐ Load removal path confirmed: ☐ Yes ☐ No

Check: The required span and lifting height should be based on the actual maintenance area and hook working range, not building dimensions alone.

3. Operation

- ☐ Working hours/day: ____ h
- ☐ Working days/year: ____ days
- ☐ Lifts/hour: ____
- ☐ Average lifted load: ____ % of rated capacity
- ☐ Maximum lifted load: ____ % of rated capacity
- ☐ Maximum-load frequency: ____
- ☐ Average lifting distance: ____ m/cycle

- ☐ **Average crane travel distance:** ____ m/cycle
- ☐ **Expected service life:** ____ years
- ☐ **Required duty class:** ☐ ISO ____ ☐ FEM ____ ☐ To be evaluated

Check: Duty class should be selected from the actual operating cycle and load spectrum, not from crane capacity alone.

4. Environment

- ☐ **Normal ambient temperature:** ____ °C
- ☐ **Maximum ambient temperature:** ____ °C
- ☐ **Minimum ambient temperature:** ____ °C
- ☐ **Radiant heat present:** ☐ Yes ☐ No
- ☐ **Furnace / hot equipment nearby:** ☐ Yes ☐ No
- ☐ **Distance from heat source:** ____ m
- ☐ **Crane operates directly above hot equipment:** ☐ Yes ☐ No
- ☐ **Steel dust:** ☐ Low ☐ Medium ☐ High
- ☐ **Steel scale:** ☐ Yes ☐ No
- ☐ **Oil mist / grease:** ☐ Yes ☐ No
- ☐ **Cooling water:** ☐ Yes ☐ No
- ☐ **Water spray / descaling water:** ☐ Yes ☐ No
- ☐ **High humidity / condensation:** ☐ Yes ☐ No
- ☐ **Corrosive atmosphere:** ☐ Yes ☐ No
- ☐ **Installation:** ☐ Indoor ☐ Semi-outdoor ☐ Outdoor

5. Crane Configuration

- ☐ **Girder configuration:** ☐ Single Girder ☐ Double Girder
- ☐ **Hoist type:** ☐ Electric Wire Rope Hoist ☐ Open-Winch Hoist
- ☐ **Control:** ☐ Pendant ☐ Radio Remote ☐ Cabin ☐ Combined
- ☐ **Hoisting speed:** ____ m/min
- ☐ **Trolley speed:** ____ m/min
- ☐ **Crane travel speed:** ____ m/min
- ☐ **Hook/accessory:** ☐ Standard Hook ☐ Lifting Beam ☐ Spreader ☐ Other ____
- ☐ **Power supply:** ____ V / ____ Hz / ____ Ph

For heavy steel plant maintenance, a **double-girder overhead crane** is generally the preferred starting point for capacities around 20 tons and above, particularly when the crane has a long span, high lift, frequent lifting cycles, or demanding service conditions.

For higher-duty maintenance work, an **open-winch hoist** may be considered instead of a standard wire rope hoist.

6. Building and Runway

- ☐ **Existing runway:** ☐ Yes ☐ No

- ☐ **Runway rail type:** _____
- ☐ **Rail gauge:** _____ m
- ☐ **Runway elevation:** _____ m
- ☐ **Runway beam dimensions:** _____
- ☐ **Column layout available:** ☐ Yes ☐ No
- ☐ **Wheel load capacity confirmed:** ☐ Yes ☐ No
- ☐ **Building headroom confirmed:** ☐ Yes ☐ No
- ☐ **Building structural capacity confirmed:** ☐ Yes ☐ No
- ☐ **Existing runway drawings available:** ☐ Yes ☐ No
- ☐ **Plant layout available:** ☐ Yes ☐ No

If an existing runway will be reused, provide the available runway and structural information so the crane supplier can check crane wheel loads, rail gauge, clearances, and structural compatibility.

7. Final RFQ Check

Before sending the inquiry to a crane manufacturer, make sure these key items are confirmed:

- ☐ Maximum maintenance load
- ☐ Average maintenance load
- ☐ Lifting accessories
- ☐ Future load requirements
- ☐ Crane span
- ☐ Lifting height
- ☐ Hook coverage
- ☐ Headroom
- ☐ Working hours/day
- ☐ Lifts/hour
- ☐ Load spectrum
- ☐ Maximum-load frequency
- ☐ Required duty class
- ☐ Ambient temperature
- ☐ Radiant heat
- ☐ Dust and steel scale

- ☐ Water exposure
- ☐ Corrosion conditions
- ☐ Girder configuration
- ☐ Hoist type
- ☐ Control method
- ☐ Hoisting and travel speeds
- ☐ Existing runway
- ☐ Rail gauge
- ☐ Column layout
- ☐ Wheel load capacity
- ☐ Plant layout / structural drawings

Quick Selection Summary

Category	Status
Load	☐ Confirmed
Dimensions	☐ Confirmed
Operation	☐ Confirmed
Environment	☐ Confirmed
Crane configuration	☐ Confirmed
Building / runway	☐ Confirmed
Plant layout	☐ Available

Buyer takeaway: If these six areas are clearly defined, the crane manufacturer can make a much more accurate preliminary selection and quotation. The final crane specification should still be confirmed through engineering review of the load spectrum, operating cycle, plant layout, environmental conditions, and runway structure.

