

Port Bulk Materials Handling Capabilities

For over 40 years BMT WBM has built a reputation for providing high quality specialist engineering support services to operators of port facilities. Our comprehensive range of independent and multidisciplinary services offer clients confident solutions to a wide variety of complex technical issues relating to materials handling plant and equipment used at port facilities. BMT WBM's experience and familiarity with large port machinery includes:-

- Ship Loaders
- Ship Unloaders
- Container Cranes
- Reclaimers
- Stackers
- Train Unloading Stations
- Conveyors & Feeders

For companies operating bulk materials export and import facilities, container terminals and mine site or power station stockyards, BMT WBM designs port materials handling systems and assists with the selection, operation and maintenance of machinery.



Key engineering services

- System and plant design
- Concept design studies, feasibility studies, due diligence studies, plant life extension, risk and hazard assessment.
- Large machine & conveyor analysis and design
- Construction technical support & commissioning
- Structural Analysis & Stability Assessment
- Special purpose machine design
- Failure & Damage investigation
- Technical documentation
- Field test and measurement services
- Permanent monitoring & instrumentation
- Maintenance technical support
- Advanced analyses CFD, DEM, FEA, fatigue & coupled analysis

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Project examples

Blending and Barge Loading Facility Kalimantan

BMT WBM was engaged to prepare designs to more than double the output of an existing barge loading facility. The facility handles a number of different grades of coal to deliver a specified blend to each barge.



Project Involvement

- Development of concepts for the upgraded facility.
- Preparation of cost estimates for selected concepts.
- Assessment of site operating practices, including truck traffic.
- Layout drawings for preferred options
- Detailed BOQ and estimates for overall plant design.
- Detailed specifications for proprietary items required for the new work.
- Detailed design and drawings of the new conveyors and associated equipment and structures.
- Detail design and drawings of the electrical installation for the new conveyors
- Detail design of the new site HV power distribution system.
- Definition of the detailed control logic and system requirements.
- Technical support during construction and commissioning.

Materials Handling Design in India

BMT WBM and BMT Consultants India have collaborated to provide technical assistance for major port related materials handling projects both within India and in Australia.



Project Involvement

- Materials handling system review and value engineering study for the Adani Dahej Port, India (14 mtpa) .
- Materials handling system review and value engineering study for 33 Mundra Port, India (33mtpa).
- Design Review of 4 stacker reclaimers at Mundra and 2 at Dahej.
- Design Review of grab unloader at Mundra.
- Due diligence on cranes at Cochin – DP World.
- Design Review of stacker reclaimer for Murmagoa Port, India
- Design Review of stacker reclaimer for Vizag Port, India
- Concept and detailed materials handling design for the Abbot Point Port expansion, Queensland on behalf of Adani.
- Concept materials handling design and cost estimates for Bunbury Port expansion, Western Australia on behalf of Lanco.