

PRESS RELEASE



PIANC

The World Association for Waterborne
Transport Infrastructure

5 March 2019

NEW PIANC PUBLICATION AVAILABLE



Title: 'Design Principles for Dry Bulk Marine Terminals'

Author's: MarCom Working Group 184

Price: € 199,00 (290 pages)

Available at: <https://www.pianc.org/publications/marcom/wg184>

Introduction:

The dry bulk solids handling industry is mainly concerned with transporting products from locations with large minerals reserves or production facilities, but with little local demand, to regions requiring inputs for processing, distribution or manufacturing. Conventional dry bulk trade encompasses: Facilities which produce or stock dry bulk material in large dedicated terminals, Carriers to transport different types of bulk materials, Facilities to receive bulk materials for direct use or temporary storage for later processing, or A multi-modal facility in both export and import terminals.

Recently, the market has shown a trend for both increasingly larger terminals as well as small specialised terminals for specific locations.

Small specialised terminals generally handle minor quantities of bulk materials with strong demand or value-added products. Minor bulk materials may be loaded into a single hold of a large carrier as part of a multi-product cargo or commonly transported by smaller vessels of less than 40,000 dwt.

The demand for dry bulk carrier capacity is determined by the underlying demand for commodities transported in these ships, which in turn is influenced by trends in the global economy. Seaborne dry bulk trade increased by slightly more than 2 % on an average annual basis during the 1980s and 1990s. However, this rate of growth increased dramatically between 1999 and 2006, when trade in the three major dry bulk commodities (iron ore, coal, and grain) increased from 2.0 billion tonnes to 2.5 billion tonnes (UN data). By 2017, the trade in the three major bulk materials increased to 3.2 billion tonnes. Total seaborne dry bulk trade was 4.3 billion tonnes in 2017, resulting in nearly 38 billion tonne-km of seaborne trade. Much of this growth has been driven by Chinese demand for iron ore and coal.

By weight, shipping of the three main bulk materials represented about 27 % of the world seaborne trade in 2017, and overall dry bulk products was some 35 % of world seaborne trade. Coal and iron ore form by far the largest portion of the world's dry bulk shipping market, but there are a large number of other products traded by sea in large to very small quantities.

No contemporary guidelines exist for planning, site selection, design, vessel handling, operation, hazard management, storage facilities, transshipment, maintenance and environmental considerations of specialised marine terminals for the import and export of dry bulk solids such as coal, iron ore, grain, and aggregates. The aim is to produce a modern reference covering current technology, vessel types, and bulk handling equipment now in use. It is recognised that this has progressed rapidly in recent years. This Working Group report aims to provide planning and design guidelines for dry bulk terminals in order to provide a safe, efficient and cost-effective operation and includes guidance on: Terminal location and type, Vessel handling and mooring, Required water depths, Cargo hazard, management, Materials handling equipment, Ship loading and unloading, Outloading or receival facilities, Storage facilities, Processing and post-processing, Operational considerations, Transshipment, Social and environmental considerations and Impact of climate change

This document should be considered as an additional document to existing standards and guidelines, and thus covers only aspects relevant to dry bulk marine terminal design. Where appropriate, references are made to codes, standards and guidelines covering design aspects for other disciplines or types of facilities which have been found to also apply to dry bulk marine terminals.

Steel products, timber logs, containerised bulks (such as grain in containers) and other break bulk products are not included as dry bulk in this guideline. (Note: These products are often included in total dry bulk trade data by UN and other sources).

NOTE: The objective of this report is to provide information and recommendations on good practice. Conformity is not obligatory and engineering judgement should be used in its application, especially in special circumstances. This report should be seen as an expert guidance and state of the art on this particular subject. PIANC disclaims all responsibility in case this report should be presented as an official standard.

PLEASE NOTE that for only € 95,00 (€ 35,00 for students) you can become an **individual member of PIANC**. Individual members receive a login and password to access the members-only page on our website. There you can download all published (English) PIANC reports **FOR FREE**. You'll also receive the new PIANC YEARBOOK as a hard copy. (<http://www.pianc.org/individualmember.php>)