UNLOADING SYSTEM DESIGN OF BARGE
ON DREDGING PROCESS IN MAHAKAM RIVER REGION
EAST KALIMANTAN

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ABSTRACT

Barge is one means of water transportation. The tool is typically used to
transport the solid material in the form of coal, sand and mud. The process of
unloading the barge was found on a variety. In this planning, unloading system that
used is bottom open system where the bottom hull of ship will open so the material
will be released.

In this system, equipment plan is in variety. Starting from the bottom door
construction plans using references BKI Volume II Rules for Hull. Planning of chain
and windlass based from BKI and Dubey Ltd catalok. The plan for stiffener and the
door ensel axis is planned based on existing catalok. Ships comparison is used Barge
133 feet.

From the planning of bottom open, the bottom construction for the main door
frame sizes available = 150 x 90 x 12 mm, the web frame = 200 x 20 mm / 200 x 15
mm, thick base plate = 12 mm and the side plate with 40 mm thick. In addition, the
obtained size Ordinary chain link with Ø = 26 mm, B = 94 mm, L = 126 mm, Ø
Enlarge links = 29 mm, B = 104 mm, L = 172 mm and End Link with Ø = 26 mm, B
= 94 mm, L = 126 mm, and the windlass to pull the load with 1.95 tons YMA 40-2-45
type. The results of other planning freshen the transverse size = 600 x 600 x 50 mm
and freshen up = 300 x 300 x 20 mm and the size of a door hinge shaft Ø = 135 mm
of material JIS G 4103 SNCM25.

Keyword: barge, unloading, bottom open, bottom door, ordinary link, enlarge link,
end link.