

the clamshell grab

For many years now, Nemaq is the preferred partner for the handling of dry bulk materials. Nemaq continuously explores the possibilities to make it's grabs as efficient as possible. The latest development is a new range of enclosed type clamshell grabs, which set new standards in environmentally friendly bulk handling. The new range of clamshell grabs has a new revolutionary shape of the shells and also includes a number of innovations, which reduce spillage.

Shells of conventional clamshell grabs mostly are designed with square corners, which are reinforced by means of extra strip plates and lots of welds at the shells corners. Square corners wear out fast and also induce damage to ships and to product degradation. Also, square corners at the lip plates, wear out fast and will result in spillage of material from the grab.

Rounded corners reduce spillage

The new shell design of Nemaq comprises a folded shell construction, which is made by means of a computer-controlled hydraulic press. This new system results in grab shells that are equipped with largely rounded corners. Not only bottom lip plates, but the entire grab shell will be manufactured with largely rounded corners, inclusive of the upper part of the shells. This rounded design minimizes

the risk of damage to the ship's holds. And the extremely flushed design of the shells minimizes residual cargo on the grab construction and reduces spillage drastically. Besides, the grab has a better efficiency during digging in of the grab in the material because of balanced geometry. This leads tot a faster emptying over the bunker an reduces cycle time.

Increased lifespan of the shell

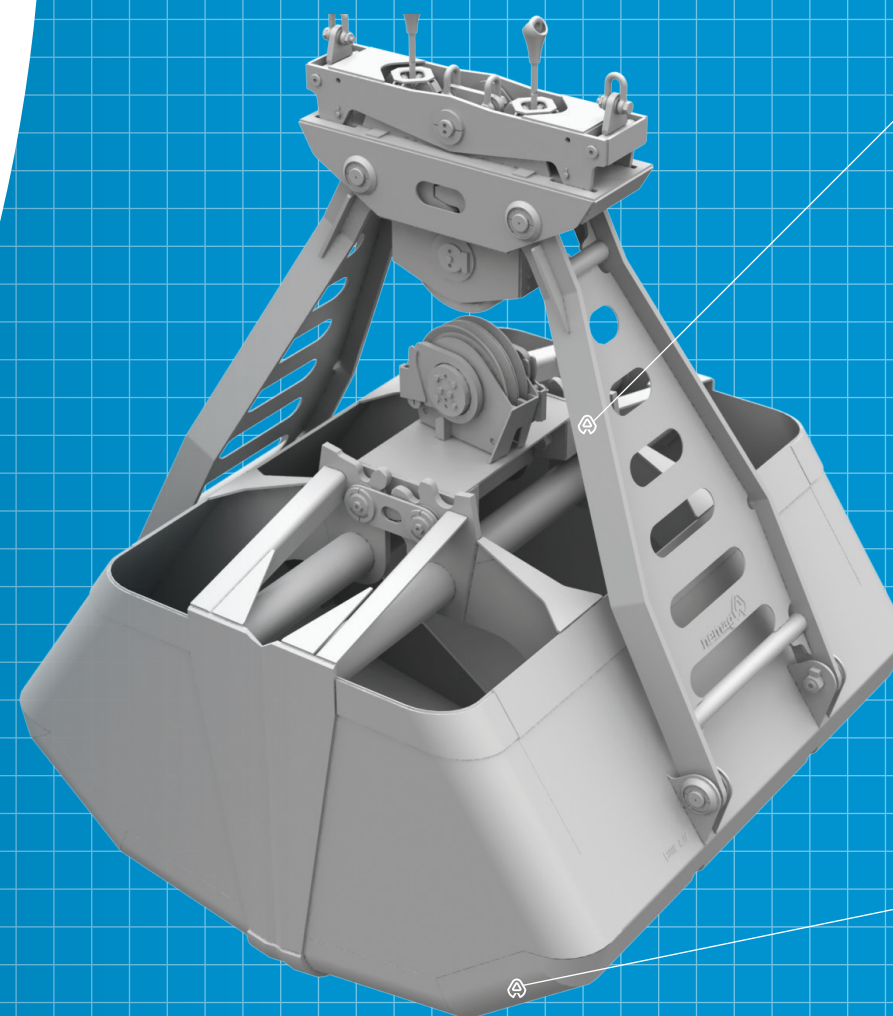
The cold forming of the shells avoids degradation of wear resistant steel. The folded shell construction is extremely stabile and wear and tear in the 'corners' will be minimized resulting in improved lifespan of the grab (especially important when handling abrasive materials). Secondly, the position of the welds is moved away from the corners and result in a substantially longer life span of the

grab shells. Furthermore, the number of welds in the shells has been reduced drastically; this leads to significant lower welding heat input in the wear resistant material of the shells.

The new clamshell design also offers new possibilities to increase strength of the grab in combination with same or even lower dead weight of the grab. First successful supplies have been made to various European customers including Terex Germany, EON UK, OBA Amsterdam, Dong Energy India and ZHD in The Netherlands for the handling of steam coal, wood pellets and alumina in capacities of up to 50 ton S.W.L.

For a first impression of the new grab, please have a look at <http://vimeo.com/60820616>

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characteristics

- Balanced design
- Shell type open, half closed or closed
- Very stable shell construction
- Optimal symmetrical closing because of tooth segments
- Low-friction cable guide with guide wheels for extremely long life span of the closing cable
- Rounded lip plates to avoid damage to ship
- Shells manufactured out of wear resistant steel
- Arms manufactured out of high tensile steel
- Light running pivot points
- Cylinder bearings in the sheaves
- Special lip plate types on demand
- Central lubrication on demand

rounded corners

- No welds at corners

