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Your reference	Your letter of	Our reference	Extension	Date
1610ld723	2014-07-09	14-061671/STEHEU	+49 40 36149-1783	2014-07-14

Approval Type: Drawing/Document Approval
Lower Block SWL 80t

Dear Sir or Madam,

Thank you for your document submission to DNV GL.

Attached please find each of the documents that we have received.

These have been examined in accordance with the respective chapters of the GL Rules for Classification and Construction VI-2-2 "Loading Gear on Seagoing Ships and Offshore Installations" Edition 2012 and are duly marked with our respective notation.

List of Drawings with Remarks

Drawing No./Rev. No.	Drawing Title	Status	Red entries	Response by client necessary	Follow-up action by DNV GL surveyor	Only for info, no reply necessary
1. 14-061671 (+ diverse)	80t Lower Block	Noted/ Examined/ For information only	<input checked="" type="checkbox"/>			
1.1. Basis of our examination were the following conditions:				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- design temperature: -10°C - hoist load coefficient Ψ (psi) $\leq 1,3$ - maximum 20.000 load cycles Above stated operation condition shall be mentioned in the certificate.						
1.2. The examination and load testing has to be carried out according to our a.m. Rule, section 7, table 7.4:				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
$L_{Pstat} = ((1,22 \times SWL) + 20t) = ((1,22 \times 260t) + 20t) = \mathbf{117,6t}$						

Chairman of the Supervisory Board: Henrik O. Madsen • **Executive Board:** Joachim Segatz (Chairman) • Tor E. Svensen
DNV GL SE, Registered Office Hamburg No. HRB 115442

The latest edition of the General Terms and Conditions of DNV GL SE is applicable.

1.3. The construction has to protect permanently against corrosion. Screws shall be secured against unscrewing by reliable means.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.4. All welding seams have to be manufactured by qualified persons according to approved welding procedure specifications. The weld quality shall not be less than level B – ISO 5817.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.5. <u>Hook</u> The type of mechanism is classed 1A _m (Triebwerksgruppe 1A _m according to DIN 15020) and will be stated in the certificate issued by our surveyor.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.6. <u>Rope sheave</u> Rope sheaves of cranes are not subject to DNVGL plan approval. Our examination is limited to the dimensions relating to the rope strength, GL crane type C1 . We have presupposed that the rope sheaves are made from normalized steel according to a recognized international standard.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.7. The lower block has to be marked permanently and visible with the Safe Working load "SWL" and dead weight "WT".	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Our invoice will be sent to you separately.

Should you have any further queries on this matter, please contact us using our reference no. 14-061671.

Your DNV GL contact is: Stefan Heuer, phone +49 40 36149 1783, email stefan.heuer@dnvgl.com

Yours faithfully,
for DNV GL SE

i.A. 
Daniel Abt

i.A. 
Stefan Heuer

NOTE

Response by client necessary:	The submitted data contains non-compliances with rules and regulations or information is missing or unclear would be examples where a response by the client would be necessary. The response may be the submission of a revised drawing/document or part copies with annotated alterations or if sufficient, a written clarification. Please note that the status <i>Not accepted</i> requires that a revised version of a drawing/document is to be submitted.
Follow-up action by DNV GL surveyor:	A remark is to be followed up and verified by the DNV GL site surveyor.
Only for info, no reply necessary:	The remark may be considered as additional information or advice to which the client need not respond. Please note that remarks bearing the status <i>Only for info, no reply necessary</i> are regarded by DNV GL as legally binding information.