ABB Stacking Care
Preservation, Lay-up maintenance and Start-up services
Stacking of rigs and vessels requires extraordinary maintenance actions to preserve the equipment.

**Warm stacked** (also called Hot stacked or Ready stacked)
- A rig is deployable (warm) but idle (stacked).
- Warm stacked rigs are typically mostly crewed, actively marketed, and stand-by.
- Routine rig maintenance is continued, and daily costs may be modestly reduced.

**Cold Stacked** (sometimes called mothballed)
- A rig has been shut down and stored in a harbor, shipyard, or designated offshore area.
- Cold stacking is a cost reduction step taken when a rig’s contracting prospects look bleak.

Option when looking for contract on short-term (months to quarter)

Option when rig is out of contract for following year
ABB Stacking Care

ABB Stacking Care – Risks and value to customer?

Risks when not having a good preservation plan

• Risk of permanent damage to the equipment
• Costly start-up
• Delayed start-up

→ Risk for loosing the contract

Customer benefits

• Professional preservation plan
• Risk reduction, quality assurance
• Ensuring equipment is kept in good condition
• Securing ongoing warranties
• Short and smooth start-up time
• Close support by ABB’s global service network
• Reduce negative financial business effect

→ A low Total Cost of Ownership

Cost of ownership = Purchase + Cost of running + Cost of not running
ABB Stacking Care
ABB Stacking Care – Complete preservation package

Preservation

Lay-up maintenance

Start-up

Stacking of rigs and vessels requires extraordinary maintenance actions to preserve ABB equipment, which is not covered in the standard OEM equipment manual.

• All ABB equipment will be preserved for long or short time shut down.
• Water will be drained, batteries disconnected and monitoring equipment will be installed.

• In the lay-up phase the ABB equipment will be remote monitored via ABB’s RDS system and visually inspected once every month.

• Preservation procedures will be reversed and all ABB equipment will be prepared for start-up.
ABB Stacking Care

ABB Stacking Care – Reinstatement Service

- Preservation performed by customer
- Lay-up maintenance performed by customer
- Site survey to identify preservation performed by customer and identify work scope
- Safe and professional work planning and execution
- Quality assurance
<table>
<thead>
<tr>
<th>ABB Stacking Care</th>
<th>Reinstatement service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>• Professional preservation plan</strong></td>
<td>- Plan together with customer, perform preservation based on lay-up profile</td>
</tr>
<tr>
<td><strong>• Lay-up maintenance</strong></td>
<td>- Monitoring equipment during lay-up, through RDS system (if available)</td>
</tr>
<tr>
<td></td>
<td>- Monthly/bi-monthly surveys</td>
</tr>
<tr>
<td><strong>• Start-up service</strong></td>
<td>- Reduced start-up time and cost by close planning together with customer</td>
</tr>
<tr>
<td></td>
<td>- Resources and parts available at desired time</td>
</tr>
<tr>
<td><strong>Site survey</strong></td>
<td>- Review preservation work performed by customer; safe and quick identification of preservation status</td>
</tr>
<tr>
<td><strong>Support from ABB experts</strong></td>
<td>- OEM guidance and support</td>
</tr>
<tr>
<td></td>
<td>- Can combine extended maintenance scope such as 5 years maintenance, re-classification and retrofit solutions</td>
</tr>
<tr>
<td><strong>Professional reinstatement service</strong></td>
<td>- Safe and professional work planning and execution</td>
</tr>
</tbody>
</table>
ABB Stacking Care
Program schedule example (Vessel at yard)