ElectroProject Soft Torque

System configurations overview
TABLE OF CONTENTS

1 Slave Master configuration ........................................................................................................... 3
2 Master configuration ....................................................................................................................... 4
3 Embedded HMI screens in TDS controls ....................................................................................... 5

List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHA</td>
<td>Bottom Hole Assembly</td>
</tr>
<tr>
<td>DP</td>
<td>Drill Pipe</td>
</tr>
<tr>
<td>EP</td>
<td>ElectroProject</td>
</tr>
<tr>
<td>EPST</td>
<td>ElectroProject Soft Torque</td>
</tr>
<tr>
<td>HMI</td>
<td>Human Machine Interface</td>
</tr>
<tr>
<td>TD</td>
<td>Top Drive</td>
</tr>
<tr>
<td>TDS</td>
<td>Top Drive System</td>
</tr>
<tr>
<td>VFD</td>
<td>Variable Frequency Drive</td>
</tr>
<tr>
<td>SCR</td>
<td>Silicon Controlled Rectifier</td>
</tr>
<tr>
<td>PLC</td>
<td>Programmable Logic Controller</td>
</tr>
</tbody>
</table>

Client: EP
Date: May 12th 2016
Project: EPST Systems Configurations
Issue: 4.0
Status: Confidential
Pages: 2 / 5
1 Slave Master configuration

- HMI (Control panel)
- Ethernet
- Driller's cabin
- VFD Cabinet
- TDS PLC Controller
- VFD / SCR
- Actual speed (digital encoder feedback)
- Motor
- Gearbox
- TD area
- Drill String and Bottom Hole Assembly
- Bypass mode

---

Client: EP
Project: EPST Systems Configurations
Status: Confidential
Date: May 12th 2016
Issue: 4.0
Pages: 3 / 5
2 Master configuration

Suitable for systems where parallel bus communication with VFD/SCR is possible.

![Diagram of system configurations]

- HMI (Control panel)
- Ethernet
- Drillers cabin
- VFD Cabine
- TDS PLC Controller
- VFD / SCR
- Profibus or Profinet
- Actual speed (digital encoder feedback)
- Drill String and Bottom Hole Assembly
- Motor
- Gearbox
- TD area
- Ethernet
- Profibus or Profinet
3  Embedded HMI screens in TDS controls