

| Description:                                      |                                                                                                            |                |        | Product description                                      |                    |                |                    |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------|--------|----------------------------------------------------------|--------------------|----------------|--------------------|
| <b>Magnet Assemblies w.<br/>Permanent magnets</b> |                                                                                                            |                |        | <b>SXR Phase Shifter -<br/>Permanent Magnet Assembly</b> |                    |                |                    |
| Order No.:                                        |                                                                                                            | Customer:      |        | Part/Drawing No.:                                        |                    | Serial No.:    |                    |
| <b>504313</b>                                     |                                                                                                            | <b>SLAC</b>    |        | <b>7103050895</b>                                        |                    | <b>2410110</b> |                    |
| To be carried out after assembly                  |                                                                                                            |                |        |                                                          |                    |                |                    |
| No.                                               | Description                                                                                                | Test equipment | Result | Criteria /<br>Tolerance                                  | Comments           | Accepted       | Sign/Date          |
| <b>1</b>                                          | <b>Document information</b><br><b>Template: Test_504313_MagnetAssembly.A</b>                               |                |        |                                                          |                    |                |                    |
|                                                   | Author:                                                                                                    | N/A            | OK     |                                                          |                    | OK             | 06/03/2024<br>DANA |
|                                                   | Reviewer:                                                                                                  | N/A            | OK     |                                                          |                    | OK             | 12/03/2024<br>EBCH |
| <b>2</b>                                          | <b>Visual Inspection according to main drawing</b>                                                         |                |        |                                                          |                    |                |                    |
| <b>3</b>                                          | <b>Magnet Arrays:</b>                                                                                      |                |        |                                                          |                    |                |                    |
| <b>4</b>                                          | <b>Torque wrench check for magnet assembly</b><br><b>According to drawing: 7103050655 &amp; 7103050656</b> |                |        |                                                          |                    |                |                    |
|                                                   | Verify torque wrench setting at torque transducer                                                          | 2361-D         | 5      | 5Nm<br>±0,3Nm                                            | Torque Transducer. | OK             | 11/10/2024<br>bgr  |
|                                                   | Tightening torque for 10 x M5 bolts                                                                        | 2361-D         | OK     | 10 x M5 bolts<br>fastened                                | Torque Transducer. | OK             | 11/10/2024<br>bgr  |

|                                           |                                                                        |                |        |                                                  |          |             |                   |
|-------------------------------------------|------------------------------------------------------------------------|----------------|--------|--------------------------------------------------|----------|-------------|-------------------|
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| Magnet Assemblies w.<br>Permanent magnets |                                                                        |                |        | SXR Phase Shifter -<br>Permanent Magnet Assembly |          |             |                   |
| Order No.:                                |                                                                        | Customer:      |        | Part/Drawing No.:                                |          | Serial No.: |                   |
| 504313                                    |                                                                        | SLAC           |        | 7103050895                                       |          | 2410110     |                   |
| To be carried out after assembly          |                                                                        |                |        |                                                  |          |             |                   |
| No.                                       | Description                                                            | Test equipment | Result | Criteria /<br>Tolerance                          | Comments | Accepted    | Sign/Date         |
| 5                                         | Magnet array (Upper) Numbers<br>Only note (xxx)<br>See dwg. 7103050656 |                |        |                                                  |          |             |                   |
|                                           | SXRHE-VS(xxx) N                                                        | N/A            | 40     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-HS(xxx) ↑                                                        | N/A            | 57     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-VL(xxx) S                                                        | N/A            | 87     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-HL(xxx) ↓                                                        | N/A            | 49     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-VL(xxx) N                                                        | N/A            | 62     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-HS(xxx) ↑                                                        | N/A            | 08     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-VS(xxx) S                                                        | N/A            | 01     |                                                  |          | OK          | 11/10/2024<br>bgr |
| 6                                         | Magnet array (Lower) Numbers<br>Only note (xxx)<br>See dwg. 7103050655 |                |        |                                                  |          |             |                   |

|                                           |                                                             |                |        |                                                  |          |             |                   |
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| Magnet Assemblies w.<br>Permanent magnets |                                                             |                |        | SXR Phase Shifter -<br>Permanent Magnet Assembly |          |             |                   |
| Order No.:                                |                                                             | Customer:      |        | Part/Drawing No.:                                |          | Serial No.: |                   |
| 504313                                    |                                                             | SLAC           |        | 7103050895                                       |          | 2410110     |                   |
| To be carried out after assembly          |                                                             |                |        |                                                  |          |             |                   |
| No.                                       | Description                                                 | Test equipment | Result | Criteria /<br>Tolerance                          | Comments | Accepted    | Sign/Date         |
|                                           | SXRHE-VS(xxx) N                                             | N/A            | 27     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-HS(xxx) ↑                                             | N/A            | 21     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-VL(xxx) S                                             | N/A            | 94     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-HL(xxx) ↓                                             | N/A            | 32     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-VL(xxx) N                                             | N/A            | 49     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-HS(xxx) ↑                                             | N/A            | 73     |                                                  |          | OK          | 11/10/2024<br>bgr |
|                                           | SXRHE-VS(xxx) S                                             | N/A            | 106    |                                                  |          | OK          | 11/10/2024<br>bgr |
| 7                                         | Magnetic test<br>See drawing 7103050653 for magnetic center |                |        |                                                  |          |             |                   |
| 8                                         | Stretch wire measurement:                                   |                |        |                                                  |          |             |                   |

| Description:                                      |                                                                                                                                                                                                                                                                                            |                |        | Product description                                      |          |                |                    |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|----------------------------------------------------------|----------|----------------|--------------------|
| <b>Magnet Assemblies w.<br/>Permanent magnets</b> |                                                                                                                                                                                                                                                                                            |                |        | <b>SXR Phase Shifter -<br/>Permanent Magnet Assembly</b> |          |                |                    |
| Order No.:                                        |                                                                                                                                                                                                                                                                                            | Customer:      |        | Part/Drawing No.:                                        |          | Serial No.:    |                    |
| <b>504313</b>                                     |                                                                                                                                                                                                                                                                                            | <b>SLAC</b>    |        | <b>7103050895</b>                                        |          | <b>2410110</b> |                    |
| To be carried out after assembly                  |                                                                                                                                                                                                                                                                                            |                |        |                                                          |          |                |                    |
| No.                                               | Description                                                                                                                                                                                                                                                                                | Test equipment | Result | Criteria /<br>Tolerance                                  | Comments | Accepted       | Sign/Date          |
|                                                   | Stretch wire measurements at all gaps in x=-10 through x=10 in 2 mm steps.<br>At all gaps shall both 1st and 2nd integral scans be performed<br>Use seperate document for data logging, see "504313_ReferenceDoc"<br>•10 mm gap<br>•15 mm gap<br>•20 mm gap<br>•30 mm gap<br>•100,0 mm gap | N/A            | OK     | Stretchwire measurement completed                        |          | OK             | 04/10/2024<br>PMHA |
| <b>9</b>                                          | <b>Hall probe measurements:</b>                                                                                                                                                                                                                                                            |                |        |                                                          |          |                |                    |

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                        |                |        |                                                          |                |          |                    |
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| <b>Magnet Assemblies w.<br/>Permanent magnets</b> |                                                                                                                                                                                                                                                                                                                                                                                        |                |        | <b>SXR Phase Shifter -<br/>Permanent Magnet Assembly</b> |                |          |                    |
| Order No.:                                        | Customer:                                                                                                                                                                                                                                                                                                                                                                              |                |        | Part/Drawing No.:                                        | Serial No.:    |          |                    |
| <b>504313</b>                                     | <b>SLAC</b>                                                                                                                                                                                                                                                                                                                                                                            |                |        | <b>7103050895</b>                                        | <b>2410110</b> |          |                    |
| To be carried out after assembly                  |                                                                                                                                                                                                                                                                                                                                                                                        |                |        |                                                          |                |          |                    |
| No.                                               | Description                                                                                                                                                                                                                                                                                                                                                                            | Test equipment | Result | Criteria /<br>Tolerance                                  | Comments       | Accepted | Sign/Date          |
|                                                   | Hall probe measurements at intermediate gaps.<br>Before and after each measurement series,<br>reference magnetic field and magnet array<br>temperature must be logged in order to perform<br>temperature correction.<br>600 mm scans.<br>Use seperate document for data logging, see<br>"504313_ReferenceDoc"<br>•10 mm gap<br>•15 mm gap<br>•20 mm gap<br>•30 mm gap<br>•100,0 mm gap | N/A            | OK     | Hall probe gap<br>measurement<br>completed               |                | OK       | 04/10/2024<br>PMHA |

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| <b>Magnet Assemblies w.<br/>Permanent magnets</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |        | <b>SXR Phase Shifter -<br/>Permanent Magnet Assembly</b> |          |                |                    |
| Order No.:                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Customer:      |        | Part/Drawing No.:                                        |          | Serial No.:    |                    |
| <b>504313</b>                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>SLAC</b>    |        | <b>7103050895</b>                                        |          | <b>2410110</b> |                    |
| To be carried out after assembly                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |        |                                                          |          |                |                    |
| No.                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Test equipment | Result | Criteria /<br>Tolerance                                  | Comments | Accepted       | Sign/Date          |
|                                                   | Hall probe Horizontal measurements.<br>Before and after each measurement series,<br>reference magnetic field and magnet array<br>temperature must be logged in order to perform<br>temperature correction.<br>600 mm scans.<br>Use seperate document for data logging, see<br>"504313_ReferenceDoc"<br>•10 mm gap (x=-2)<br>•10 mm gap (x=-1)<br>•10 mm gap (x=1)<br>•10 mm gap (x=2)<br>•80,0 mm gap (x=-2)<br>•80,0 mm gap (x=-1)<br>•80,0 mm gap (x=1)<br>•80,0 mm gap (x=2) | N/A            | OK     | Hall probe<br>Horizontal<br>measurement<br>completed     |          | OK             | 04/10/2024<br>PMHA |

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| <b>Magnet Assemblies w.<br/>Permanent magnets</b> |                                                                                                                                                                                                                                                                                                                                                                                                                      |                |        | <b>SXR Phase Shifter -<br/>Permanent Magnet Assembly</b> |          |                |                    |
| Order No.:                                        |                                                                                                                                                                                                                                                                                                                                                                                                                      | Customer:      |        | Part/Drawing No.:                                        |          | Serial No.:    |                    |
| <b>504313</b>                                     |                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>SLAC</b>    |        | <b>7103050895</b>                                        |          | <b>2410110</b> |                    |
| To be carried out after assembly                  |                                                                                                                                                                                                                                                                                                                                                                                                                      |                |        |                                                          |          |                |                    |
| No.                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                          | Test equipment | Result | Criteria /<br>Tolerance                                  | Comments | Accepted       | Sign/Date          |
|                                                   | Hall probe Vertical measurements.<br>Before and after each measurement series,<br>reference magnetic field and magnet array<br>temperature must be logged in order to perform<br>temperature correction.<br>600 mm scans.<br>Use seperate document for data logging, see<br>"504313_ReferenceDoc"<br>• 10 mm gap (y=-0,2)<br>• 10 mm gap (y=-0,1)<br>• 10 mm gap (y=0)<br>• 10 mm gap (y=0,1)<br>• 10 mm gap (y=0,2) | N/A            | OK     | Hall probe<br>Vertical<br>measurement<br>completed       |          | OK             | 04/10/2024<br>PMHA |
| <b>10</b>                                         | <b>Visual inspection<br/>See drawing 7103050895</b>                                                                                                                                                                                                                                                                                                                                                                  |                |        |                                                          |          |                |                    |
|                                                   | Visual appearance                                                                                                                                                                                                                                                                                                                                                                                                    | N/A            | OK     |                                                          |          | OK             | 11/10/2024<br>bgr  |
| <b>11</b>                                         | <b>Production control</b>                                                                                                                                                                                                                                                                                                                                                                                            |                |        |                                                          |          |                |                    |

|                                                   |                      |                |        |                                                          |          |                |                    |
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| <b>504313</b>                                     |                      | <b>SLAC</b>    |        | <b>7103050895</b>                                        |          | <b>2410110</b> |                    |
| To be carried out after assembly                  |                      |                |        |                                                          |          |                |                    |
| No.                                               | Description          | Test equipment | Result | Criteria /<br>Tolerance                                  | Comments | Accepted       | Sign/Date          |
|                                                   | Approved by          | N/A            | OK     |                                                          |          | OK             | 11/10/2024<br>bgr  |
| <b>12</b>                                         | <b>Lead Engineer</b> |                |        |                                                          |          |                |                    |
|                                                   | Approved by          | N/A            | OK     |                                                          |          | OK             | 14/10/2024<br>DANA |