

Customer : AREVA Sachsenwerk GmbH
Order No. : 4500191205 v. 28.04.05 Pos. 020

Berlin, 29.06.05

Test Certificate

9 Current transformers, Type CT 12H
FB-No. 201017434/020
Serial No. 05/5106401 to 05/5106409

Class of insulation T72/E
Insulation level [kV] 12/28/75
Rated short-time thermal current I_{th} [kA] 31.5 3s
Rated frequency [Hz] 50
Rated dynamic current I_{dyn} [kA] 80

| Core | 1 | 2 | 3 |
|----------------------------|---------|---------|---------|
| Rated ratio [A/A] | 2500/ 1 | 2500/ 1 | 2500/ 1 |
| Rated output [VA] | 15 | 15 | 15 |
| Accuracy class | 0.2 | 1 | 10P |
| Instrument security factor | FS5 | FS5 | - |
| Accuracy limit factor | - | - | 10 |

According to the rules for instrument transformers: IEC 60044-1

Terminal markings were found to be correct.

The current transformers withstood the high-voltage test.

- Power-frequency test on primary winding / busbar : passed
- Power-frequency test on secondary windings : passed
- Inter turn test : passed
- Partial discharge test : passed

The results of the accuracy test, performed after demagnetization, comply with the limits of error for the respective accuracy class.

For results of accuracy test please see page 2 - 10

Date of test: 25.06.2005

Instrument transformer test room

by order Krause

Serial No. 05 / 5106401

Fb.No. 201017434/020

Core 1 | 1.Rated ratio 2500/ 1

| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
|--------------------|--|-------------|---------|-------------|---------|-------|---------|
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.04 | +00.07 | | | | |
| 1.00 | | -00.05 | +00.18 | +00.00 | +00.84 | | |
| 0.20 | | -00.07 | +01.12 | | | | |
| 0.05 | | -00.10 | +01.44 | | | | |

Core 2 | 1.Rated ratio 2500/ 1

| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
|--------------------|--|-------------|---------|-------------|---------|-------|---------|
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.06 | +00.15 | | | | |
| 1.00 | | -00.07 | +00.43 | -00.02 | +01.32 | | |
| 0.20 | | -00.13 | +02.10 | | | | |
| 0.05 | | -00.16 | +02.65 | | | | |

Core 3 | 1.Rated ratio 2500/ 1

| | | 15VA; PF0.8 | | | | | |
|--------------------|--|-------------|---------|-------|---------|-------|---------|
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.05 | +00.26 | | | | |

Serial No. 05 / 5106402

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.09 | +00.00 | | | | | | |
| 1.00 | | -00.09 | +00.15 | -00.11 | +03.03 | | | | |
| 0.20 | | -00.11 | +00.83 | | | | | | |
| 0.05 | | -00.15 | +01.32 | | | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.15 | +01.71 | | | | | | |
| 1.00 | | -00.15 | +01.66 | -00.06 | +03.17 | | | | |
| 0.20 | | -00.17 | +03.21 | | | | | | |
| 0.05 | | -00.22 | +04.52 | | | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.04 | -00.11 | | | | | | |

Serial No. 05 / 5106403

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.10 | +01.42 | | | | |
| 1.00 | | -00.12 | +01.71 | -00.05 | +04.25 | | |
| 0.20 | | -00.13 | +02.88 | | | | |
| 0.05 | | -00.18 | +04.01 | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.07 | +00.14 | | | | |
| 1.00 | | -00.09 | +00.54 | -00.04 | +02.10 | | |
| 0.20 | | -00.13 | +02.10 | | | | |
| 0.05 | | -00.17 | +03.08 | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.06 | +00.00 | | | | |

Serial No. 05 / 5106404

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.06 | +00.25 | | | | |
| 1.00 | | -00.07 | +00.54 | -00.02 | +01.32 | | |
| 0.20 | | -00.10 | +01.72 | | | | |
| 0.05 | | -00.15 | +03.00 | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.11 | +00.32 | | | | |
| 1.00 | | -00.11 | +00.54 | -00.14 | +05.98 | | |
| 0.20 | | -01.35 | +42.98 | | | | |
| 0.05 | | -00.78 | +23.12 | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.05 | -00.15 | | | | |

Serial No. 05 / 5106405

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.07 | +00.25 | | | | | | |
| 1.00 | | -00.08 | +00.38 | -00.06 | +02.49 | | | | |
| 0.20 | | -00.11 | +01.71 | | | | | | |
| 0.05 | | -00.14 | +02.63 | | | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.13 | +00.57 | | | | | | |
| 1.00 | | -00.14 | +00.83 | -00.07 | +01.71 | | | | |
| 0.20 | | -00.91 | +33.29 | | | | | | |
| 0.05 | | -00.58 | +16.46 | | | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.04 | +00.09 | | | | | | |

Serial No. 05 / 5106406

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|--|--|-------------|---------|--|--|
| | | 15VA; PF0.8 | | | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | | | F [%] | D [min] | | |
| 1.20 | | -00.09 | +00.73 | | | | | | |
| 1.00 | | -00.09 | +00.83 | | | -00.01 | +00.93 | | |
| 0.20 | | -00.08 | +01.14 | | | | | | |
| 0.05 | | -00.11 | +01.90 | | | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|--|--|-------------|---------|--|--|
| | | 15VA; PF0.8 | | | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | | | F [%] | D [min] | | |
| 1.20 | | -00.12 | +00.42 | | | | | | |
| 1.00 | | -00.13 | +00.70 | | | -00.08 | +02.39 | | |
| 0.20 | | -00.19 | +02.60 | | | | | | |
| 0.05 | | -00.22 | +04.19 | | | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|--|--|-------|---------|--|--|
| | | 15VA; PF0.8 | | | | | | | |
| I / I _N | | F [%] | D [min] | | | F [%] | D [min] | | |
| 1.00 | | -00.05 | +00.32 | | | | | | |

Serial No. 05 / 5106407

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|--|--|-------------|---------|--|--|
| | | 15VA; PF0.8 | | | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | | | F [%] | D [min] | | |
| 1.20 | | -00.09 | -00.15 | | | | | | |
| 1.00 | | -00.09 | +00.14 | | | -00.05 | +00.93 | | |
| 0.20 | | -00.12 | +01.24 | | | | | | |
| 0.05 | | -00.16 | +01.87 | | | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|--|--|-------------|---------|--|--|
| | | 15VA; PF0.8 | | | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | | | F [%] | D [min] | | |
| 1.20 | | -00.11 | +00.26 | | | | | | |
| 1.00 | | -00.11 | +00.45 | | | -00.05 | +01.12 | | |
| 0.20 | | -00.13 | +01.42 | | | | | | |
| 0.05 | | -00.17 | +02.43 | | | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|--|--|-------|---------|--|--|
| | | 15VA; PF0.8 | | | | | | | |
| I / I _N | | F [%] | D [min] | | | F [%] | D [min] | | |
| 1.00 | | -00.05 | +00.26 | | | | | | |

Serial No. 05 / 5106408

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.05 | +00.20 | | | | |
| 1.00 | | -00.06 | +00.44 | -00.02 | +01.62 | | |
| 0.20 | | -00.09 | +01.84 | | | | |
| 0.05 | | -00.13 | +02.77 | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.09 | +00.16 | | | | |
| 1.00 | | -00.09 | +00.26 | -00.05 | +01.14 | | |
| 0.20 | | -00.12 | +01.03 | | | | |
| 0.05 | | -00.15 | +01.71 | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | |
|--------------------|--|-----------------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.05 | +00.25 | | | | |

Serial No. 05 / 5106409

Fb.No. 201017434/020

| Core 1 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.08 | +01.12 | | | | | | |
| 1.00 | | -00.09 | +00.86 | +00.03 | +00.93 | | | | |
| 0.20 | | -00.05 | +01.61 | | | | | | |
| 0.05 | | -00.08 | +02.09 | | | | | | |

| Core 2 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | 3.75VA; PF1 | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.20 | | -00.06 | +00.15 | | | | | | |
| 1.00 | | -00.06 | +00.34 | -00.01 | +01.03 | | | | |
| 0.20 | | -00.09 | +01.21 | | | | | | |
| 0.05 | | -00.13 | +01.71 | | | | | | |

| Core 3 | | 1.Rated ratio 2500/ 1 | | | | | | | |
|--------------------|--|-----------------------|---------|-------|---------|-------|---------|-------|---------|
| | | 15VA; PF0.8 | | | | | | | |
| I / I _N | | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] | F [%] | D [min] |
| 1.00 | | -00.05 | +00.34 | | | | | | |