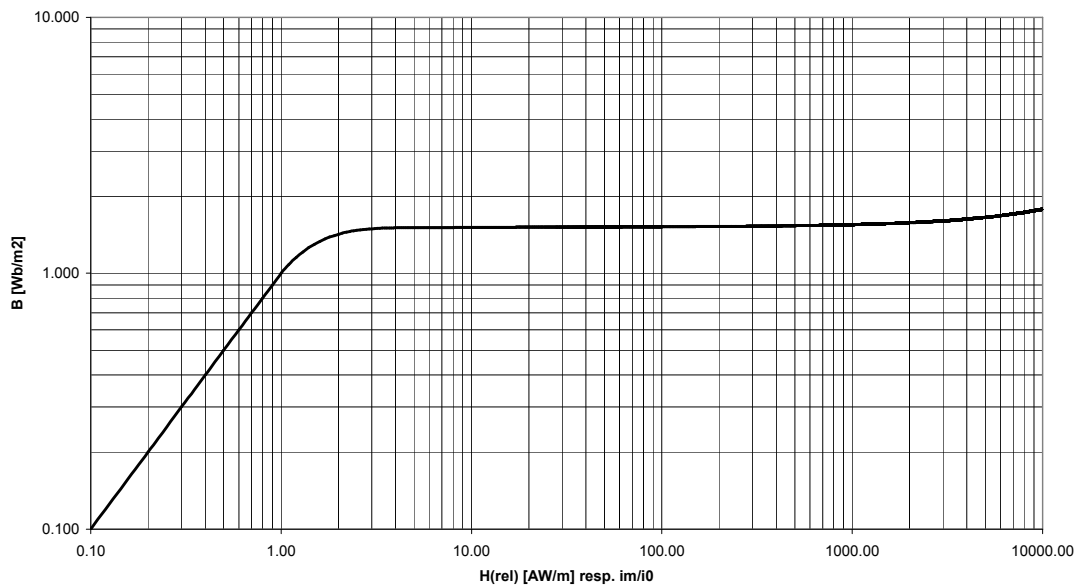
	T&D Testing Services	CT-SIM	
Subject: Verification CT-model			
Created: 2009-03-03	By: M. Achterkamp	Revision: A..	Date 2009-03-03

Magnetising characteristic

Magnetising characteristic CTSim KEMA



Subject: Verification CT-model

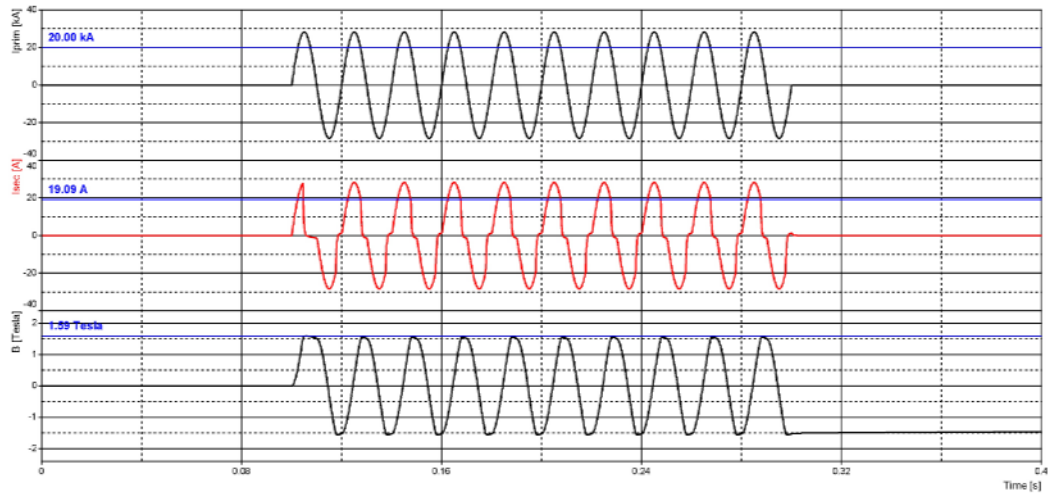
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 100% burden 0% remanence
Ifault = 20 kA symmetrical



Iprim_RMS = 20 kA
Isec_RMS = 19,09 A (measured over the 2nd period – 10th period)
RMS_ratio_error = 4,5%
B_max = 1,59 Tesla

Subject: Verification CT-model

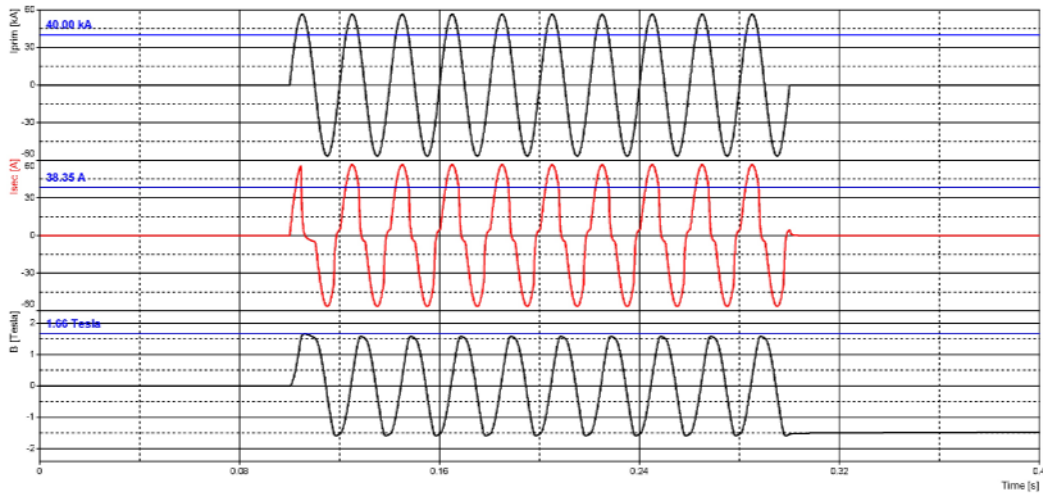
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 50% burden 0% remanence
Ifault = 40 kA symmetrical



$I_{prim_RMS} = 40 \text{ kA}$
 $I_{sec_RMS} = 38,35 \text{ A}$ (measured over the 2nd period – 10th period)
 $RMS_ratio_error = 4,1\%$
 $B_max = 1,66 \text{ Tesla}$

Subject: Verification CT-model

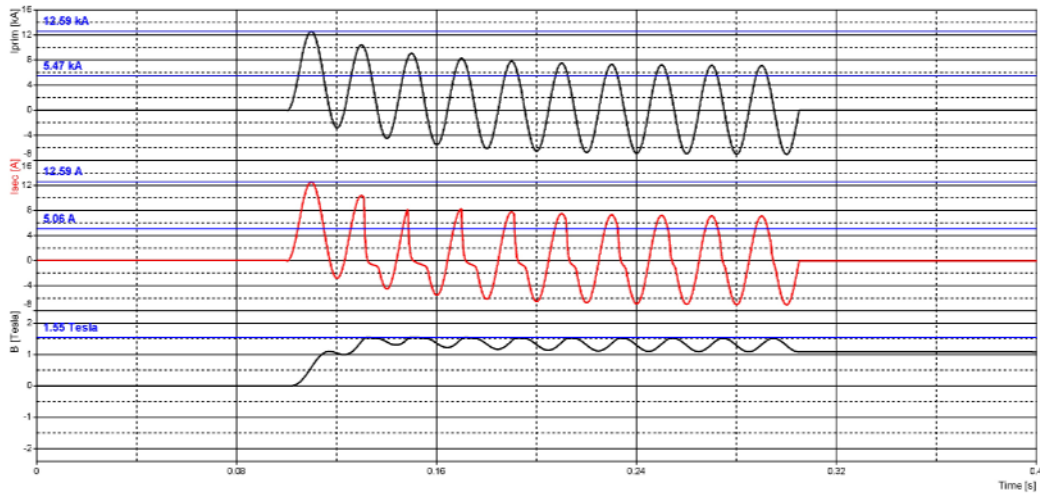
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 100% burden 0% remanence
Ifault = 5 kA 40 ms time constant, maximum dc-offset



$I_{prim_RMS} = 5,47 \text{ kA}$, time constant 40 ms, maximum dc-offset
 $I_{prim_max} = 12,59 \text{ kA}$
 $I_{sec_RMS} = 5,06 \text{ A}$ (measured over the 2nd period – 10th period)
 $I_{sec_max} = 12,59 \text{ A}$
 $B_{max} = 1,55 \text{ Tesla}$

Subject: Verification CT-model

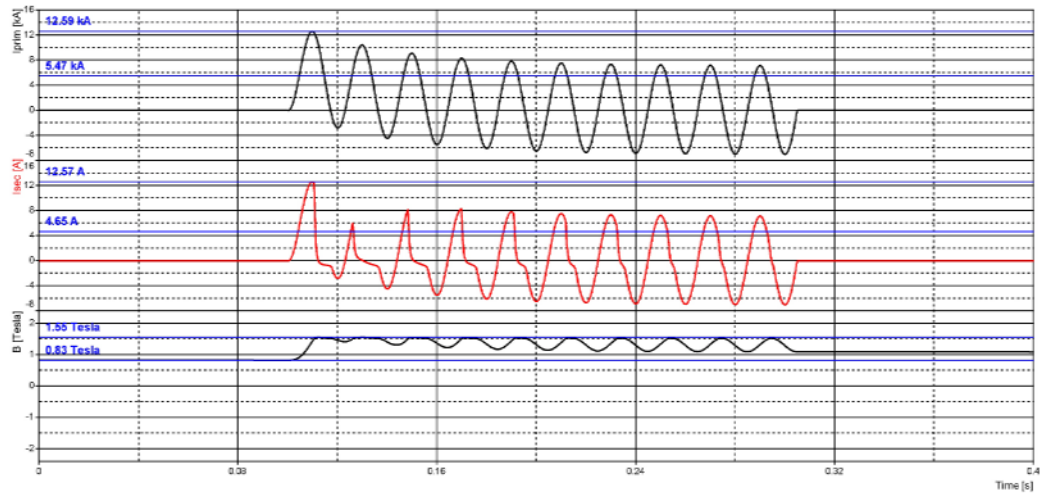
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 100% burden +50% remanence
Ifault = 5 kA 40 ms time constant, maximum dc-offset



$I_{prim_RMS} = 5,47 \text{ kA}$, time constant 40 ms, maximum dc-offset
 $I_{prim_max} = 12,59 \text{ kA}$
 $I_{sec_RMS} = 4,65 \text{ A}$ (measured over the 2nd period – 10th period)
 $I_{sec_max} = 12,57 \text{ A}$
 $B_{max} = 1,55 \text{ Tesla}$
 $B_{(+50\% \text{ rem})} = 0,83 \text{ Tesla}$

Subject: Verification CT-model

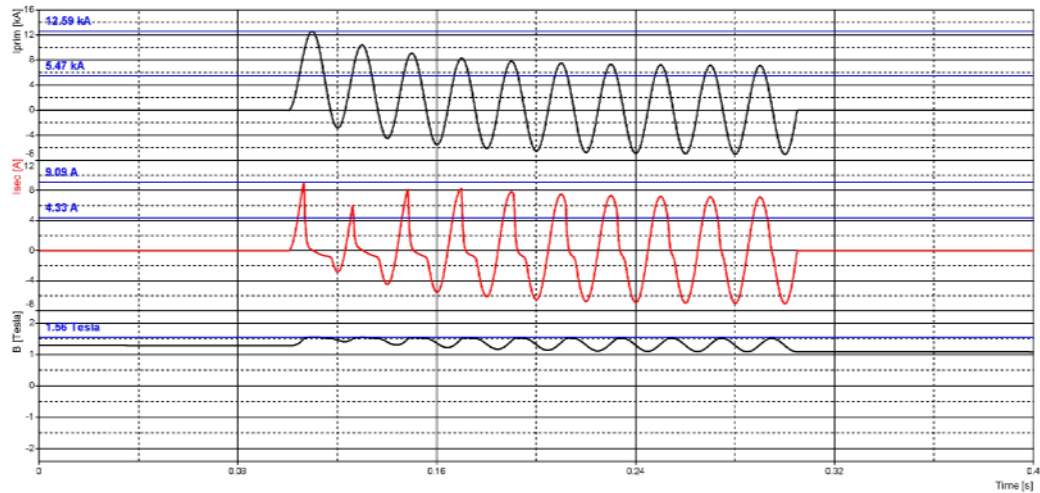
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 100% burden +80% remanence
Ifault = 5 kA 40 ms time constant, maximum dc-offset



$I_{prim_RMS} = 5,47 \text{ kA}$, time constant 40 ms, maximum dc-offset
 $I_{prim_max} = 12,59 \text{ kA}$
 $I_{sec_RMS} = 4,33 \text{ A}$ (measured over the 2nd period – 10th period)
 $I_{sec_max} = 9,09 \text{ A}$
 $B_{max} = 1,56 \text{ Tesla}$
 $B_{(+80\% \text{ rem})} = 1,29 \text{ Tesla}$

Subject: Verification CT-model

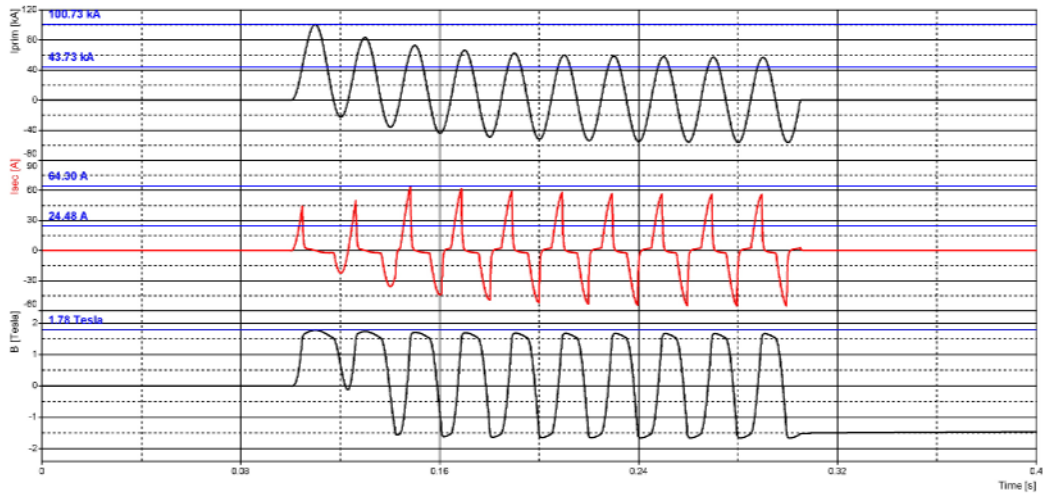
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 100% burden 0% remanence
Ifault = 40 kA 40 ms time constant, maximum dc-offset



$I_{prim_RMS} = 43,73 \text{ kA}$, time constant 40 ms, maximum dc-offset
 $I_{prim_max} = 100,73 \text{ kA}$
 $I_{sec_RMS} = 24,48 \text{ A}$ (measured over the 2nd period – 10th period)
 $I_{sec_max} = 64,30 \text{ A}$
 $B_{max} = 1,78 \text{ Tesla}$

Subject: Verification CT-model

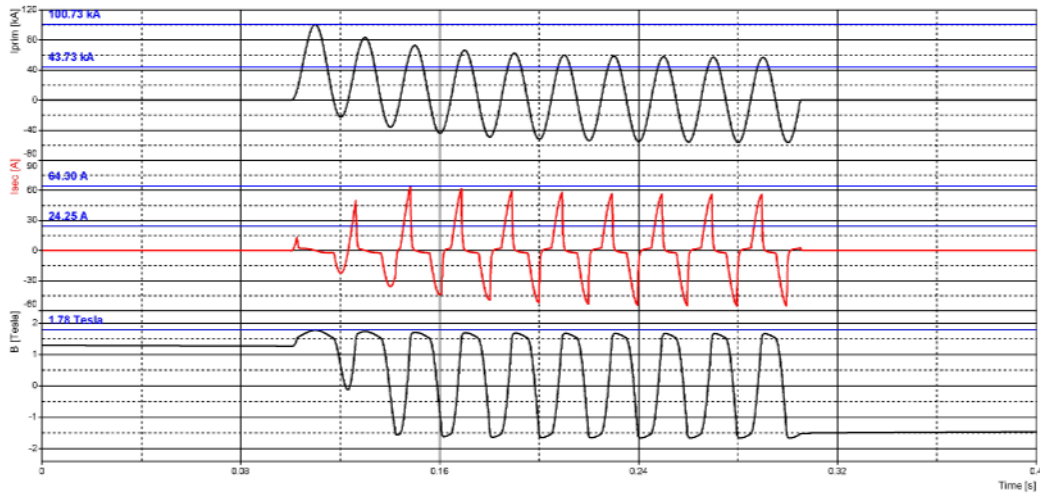
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPX 5P20 1000A:1A 30VA 100% burden +80% remanence
Ifault = 40 kA 40 ms time constant, maximum dc-offset



$I_{prim_RMS} = 43,73 \text{ kA}$, time constant 40 ms, maximum dc-offset
 $I_{prim_max} = 100,73 \text{ kA}$
 $I_{sec_RMS} = 24,25 \text{ A}$ (measured over the 2nd period – 10th period)
 $I_{sec_max} = 64,30 \text{ A}$
 $B_{max} = 1,78 \text{ Tesla}$
 $B_{(+80\% \text{ rem})} = 1,28 \text{ Tesla}$

Subject: Verification CT-model

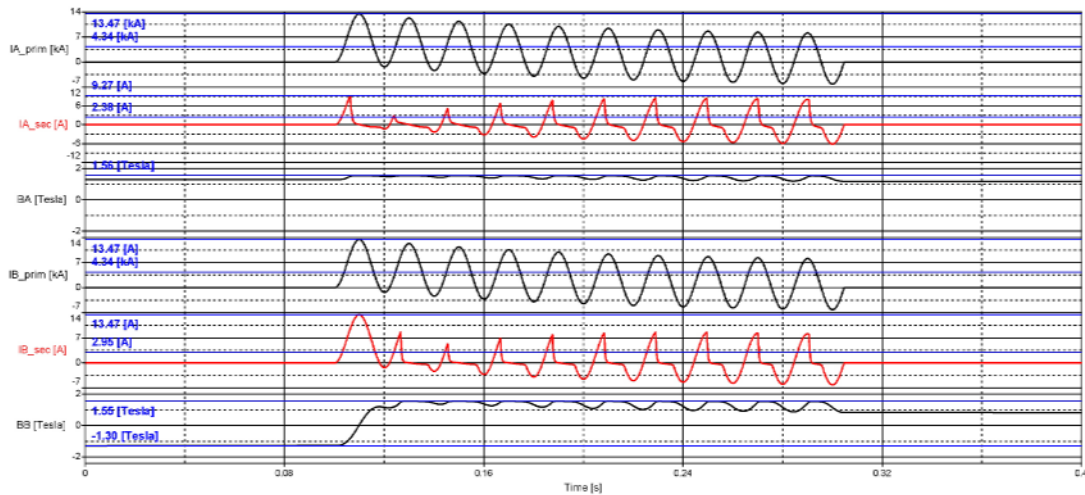
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

CTA TPX 5P20 1000A:1A 30VA 100% burden +80% remanence
 CTB TPX 5P20 1000A:1A 30VA 100% burden -80% remanence
 Ifault = 5 kA 100 ms time constant, maximum dc-offset



IAprim_RMS = 4,34 kA, time constant 100 ms, maximum dc-offset
 IAprim_max = 13,47 kA
 IAsec_RMS = 2,38 A (measured over the 2nd period – 10th period)
 IAsec_max = 9,27 A
 BA_max = 1,56 Tesla
 BA_(+80% rem) = 1,29 Tesla

IBprim_RMS = 4,34 kA, time constant 40 ms, maximum dc-offset
 IBprim_max = 13,47 kA
 IBsec_RMS = 2,95 A (measured over the 2nd period – 10th period)
 IBsec_max = 13,47 A
 BB_max = 1,55 Tesla
 BB_(+80% rem) = -1,30 Tesla

Subject: Verification CT-model

Created:
2009-03-03

By:
M. Achterkamp

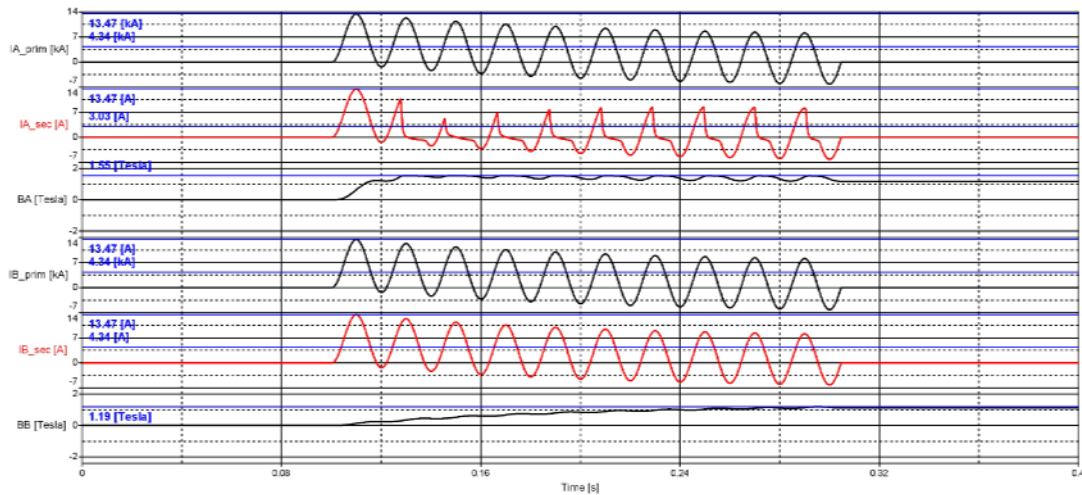
Revision:
A..

Date
2009-03-03

CTA TPX 5P20 1000A:1A 30VA 100% burden 0% remanence

CTB TPY

Ifault = 5 kA 100 ms time constant, maximum dc-offset



IAprim_RMS = 4,34 kA, time constant 100 ms, maximum dc-offset

IAprim_max = 13,47 kA

IAsec_RMS = 3,03 A (measured over the 2nd period – 10th period)

IAsec_max = 13,47 A

BA_max = 1,55 Tesla

IBprim_RMS = 4,34 kA, time constant 40 ms, maximum dc-offset

IBprim_max = 13,47 kA

IBsec_RMS = 4,34 A (measured over the 2nd period – 10th period)

IBsec_max = 13,47 A

BB_max = 1,19 Tesla

Subject: Verification CT-model

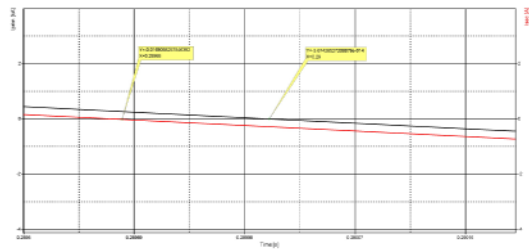
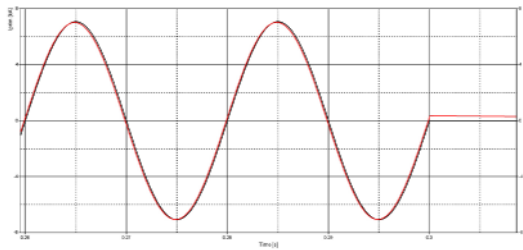
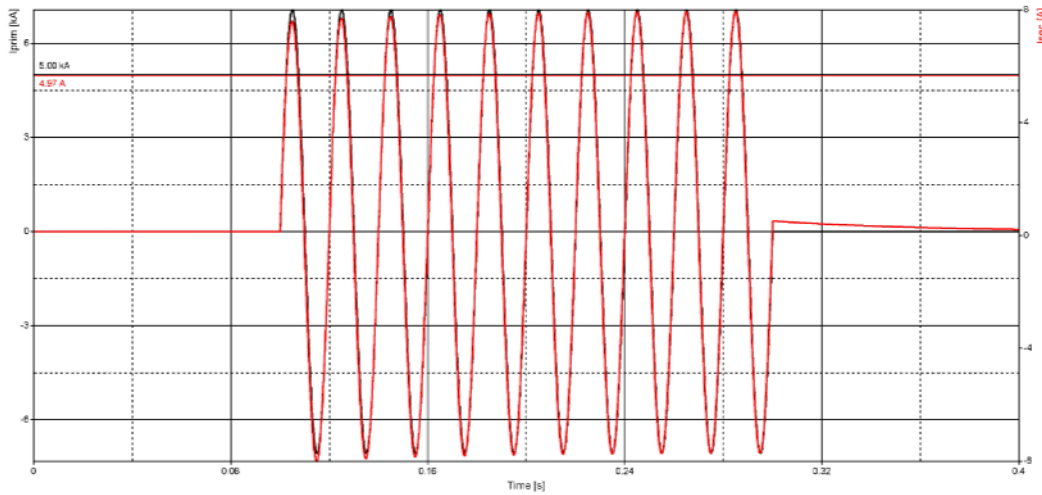
Created:
2009-03-03

By:
M. Achterkamp

Revision:
A..

Date
2009-03-03

TPZ
Ifault = 5 kA



$I_{prim_RMS} = 5,0 \text{ kA}$
 $I_{sec_RMS} = 4,97 \text{ A}$
 hoekfout = 2,16 deg (0,12 ms)