

## Expert Days ACS 6000, SEPTEMBER 2009

**Target group:** Expert and Master level certified ACS 6000 Field Service Engineers who have NOT participated in any ACS 6000 Expert Days during year 2008. These expert days are similar to the ones held in 2008.

**Pre-requisite:** Completed basic ACS6000 training

**Duration:** 3 days

**Date:** Tuesday 15 Sept 2009 – Thursday 17 Sept 2009

**Time:** 9am – 5pm

**Location:** ABB University, Singapore  
2 Ayer Rajah Crescent (Level 3)  
Singapore 139935

**Participants:** Max 20

**Objectives:** Product news for ACS 6000

Troubleshooting of ACS 6000 converter

Give deeper know how of the ACS 6000 system based on the experience the PRU (Product Responsible Unit) has received from the field

Give participants the possibility to place questions and give feedback of the product and processes

Hands-on training

## **Tuesday 15<sup>th</sup> September**

<b>09.15 – 09.30</b>	<b>Welcome</b> <ul style="list-style-type: none"><li>- <b>Contents and Objectives</b></li><li>- <b>Introduction of participants</b></li></ul>
<b>09.30 – 10.15</b>	<b>MV Drives Overview</b>
<b>10.15 – 10.45</b>	<b>Overview DTC / NP / switching frequency</b>
<b>10.45 – 11.00</b>	<b>Break</b>
<b>11.00 – 11.30</b>	<b>Software</b> <ul style="list-style-type: none"><li>- <b>New functionality</b></li><li>- <b>Limiters</b></li><li>- <b>Software merge (new functionality, manuals, commissioning etc.)</b></li></ul>
<b>11.30 – 12.30</b>	<b>General INU tuning, AD &amp; SD</b>
<b>12.30 – 13.30</b>	<b>Lunch</b>
<b>13.30 – 15.15</b>	<b>Practical exercises</b>
<b>15.15 – 15.30</b>	<b>Break</b>
<b>15.30 – 16.00</b>	<b>FOR problems</b>
<b>16.00 – 17.00</b>	<b>FAQ (<i>Frequently Asked Questions</i>)</b>

## **Wednesday 16<sup>th</sup> September**

<b>09.00 – 09.30</b>	<b>Pilatus, introduction to redundant drive concept</b>
<b>09.30 – 10.00</b>	<b>Changes in application software</b>
<b>10.00 – 10.30</b>	<b>DCS800, new EXU</b>
<b>10.30 – 10.45</b>	<b>Break</b>
<b>10.45 – 11.15</b>	<b>ARU new software release / tuning</b>
<b>11.15 – 12.00</b>	<b>Speed controller stability</b> <b>- Process stability</b> <b>- Torsional resonance issues.</b>
<b>12.00 – 13.30</b>	<b>Lunch</b>
<b>13.30 – 15.15</b>	<b>Practical exercises</b>
<b>15.15 – 15.30</b>	<b>Break</b>
<b>15.30 – 16.00</b>	<b>Hardware changes</b>
<b>16.00 – 18.00</b>	<b>FAQ (<i>Frequently Asked Questions</i>)</b>

## **Thursday 17<sup>th</sup> September**

<b>09.00 – 09.30</b>	<b>11MVA hardware changes, limitations</b>
<b>09.30 – 10.00</b>	<b>New IGBT drive (Rigi)</b>
<b>10.00 – 10.45</b>	<b>DriveMonitor</b>
<b>10.45 – 11.00</b>	<b>Break</b>
<b>11.00 – 11.30</b>	<b>Autorestart</b>
<b>11.30 – 12.00</b>	<b>Encoderless, introduction and tuning</b>
<b>12.00 – 12.30</b>	<b>Network harmonics with ARU</b>
<b>12.30 – 13.30</b>	<b>Lunch</b>
<b>13.30 – 15.15</b>	<b>Practical Exercises</b>
<b>15.15 – 15.30</b>	<b>Break</b>
<b>15.30 – 16.00</b>	<b>MCB requirements</b>
<b>16.00 – 16.30</b>	<b>Brushless EXU tuning</b>
<b>16.30 -</b>	<b>FAQ (<i>Frequently Asked Questions</i>)/ End of workshop</b>

## **Practical exercises**

**3 groups with 6-7 persons / group,  
1.5 - 2 hours / group**

### **Exercise A**

**Inverter trouble shooting (non switching IGCT's, short circuited IGCT's...)**

**Location:    ABB Training Centre, Singapore (Level 3)**

### **Exercise B**

**DriveDebug & DriveMonitor (data loggers, trendlogwin, symbols, trend window, monitor window...)**

**Location:    ABB Training Centre, Singapore (Level 3)**

### **Exercise C**

**Tuning of Machines on the Emulator (Switching Frequency, motor parameters, flying start...)**

**Location:    ABB Training Centre, Singapore (Level 3)**