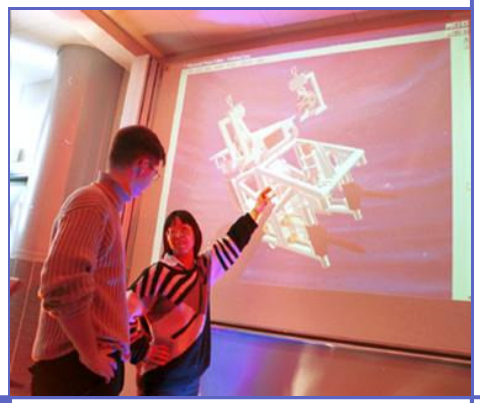
Lennart Swanström

ABB



Implementation of RoHS in product chains with high quality demands from customers

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1/12/2007

Facts about ABB

Power Products
Sales: $6.4 billion

Transformers, high- and medium-voltage switchgear, breakers, automation relays

Power Systems
Sales: $4.0 billion

Substations, FACTS, HVDC, HVDC Light, power plant & network automation

Automation Products
Sales: $5.9 billion

Low-voltage products, drives, motors, power electronics, and instrumentation

Process Automation
Sales: $5.0 billion

Control systems and application-specific automation solutions for process industries

Robotics
Sales: $1.7 billion

Robots, peripheral devices and modular manufacturing solutions for industry

- Core business organized into 5 divisions
- Headquarters: Zurich, Switzerland
- About 107,000 employees in around 100 countries (production in 45)
- Revenues in 2005: $22.4 billion

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RoHS - influence on ABBs products

- From legal point of view the influence on ABB products is limited
  - 3. IT and telecommunications equipment
  - 6. Electrical and electronic tools (with the exception of large-scale stationary industrial tools)
  - 9. Monitoring and control instruments
- Business & technical influence is however significant
  - *Business:* Customers expect ABB to comply with RoHS
  - *Technical:* No lead containing components on market in future

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RoHS - work in ABB

- Inventory of RoHS materials (lead, mercury, cadmium, chromium 6+,PBB, PBDE) in business units and actions to comply
- Development projects initiated when we see technical problems, e.g. chromium (VI) free surface treatment processes and lead free electronic components
- Close cooperation with suppliers is crucial, as example the market for lead-free components is followed together with suppliers with the intention to adapt existing products to lead-free designs
- Cooperation with other organizations, as example Orgalime which is the European federation of national industry associations representing the European mechanical, electrical, electronic and metal articles industry
- Monitor RoHS alike legislation in other countries, e.g. China
- Quarterly updated status report on RoHS is made available for all employees through the Intranet

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RoHS and WEEE quarterly status report - content

- General info about the RoHS and WEEE directives
- National legislation status
- Standardization
- RoHS and WEEE legislation in non-EU countries
- ABBs position
- Influence on ABB and ABB products
- Activities in ABB divisions
- Seminars and meetings
- Technical issues & projects
- Proposals for action plans

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RoHS info on ABBs Intranet

Sustainability toolbox
- Environmental Product Declaration, EPD
- EU legislation
- Green House Gases
- Life Cycle Tools
- Logistics
- Marketing & sales
- Material selection
- Product development
- Production
- Publications
- Restricted substances
- Supply Management
- Directives & instructions

EU legislation

In this section you find information about ABB relevant EU legislation related to environmental aspects.

EU legislation is relevant also on a global basis since similar type of legislation is also planned to be implemented in some other countries. See for example information about implementation of RoHS like legislation in China and Korea under links.

MORE ABOUT EU LEGISLATION

RoHS directive
The RoHS directive restricts the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) in new electrical and electronic equipment.

WEEE directive
The purpose of the WEEE directive is the prevention of waste electrical and electronic equipment (EEE).

EuP directive
The EuP directive (Energy-using Products) defines requirements such as energy consumption. Electrical motor systems are one of the prioritized product groups.

REACH legislation
New EU regulatory framework for chemicals.

Division networks
As a response to RoHS/WEEE division networks have been set up in ABB.

SEARCH

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LINKS
- RoHS activities in China and other countries
- Orgalime RoHS & WEEE guidelines

ATTACHMENTS
- RoHS and WEEE Status Q3 2006
- EuP Status Q3 2006

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Ex 1 lead - RoHS changes the component market

- The market of electronic products is rapidly converting to lead-free components and processes
- ABB has to be aware of the technology development of the electronics market, due to the RoHS directive
- The supply of traditional components and manufacturing processes will be limited and call for adaptation to lead-free alternatives
- Demands for lead-free products are to be expected from customers
- Close cooperation with suppliers is crucial
- Customer/quality demands - there is sometimes a need for redesign and/or recertification of the product when lead free alternatives are inserted

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Ex 2 - chromium (6+) free surface treatment

- Seminars have been arranged in ABB with the purpose to discuss alternatives to chromium (6+).
- At these seminars suppliers of chemicals for surface treatment of metals and soldering presented available alternatives
- A project started to verify selected treatments for screws and bolts, sheets (painted and unpainted) and other material
- One conclusion from the project is that there will not only be one alternative to Cr (VI) but several and the requirements must be specified for each product

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International standardization

- Standardization work is ongoing within the International Electrotechnical Commission, IEC, with the purpose to provide test procedures that will allow the industry to determine the levels of the regulated substances in electro technical products on a consistent global basis
- An International Interlaboratory Study is carried out with the purpose to determine how well the test procedures can be implemented at labs around the world
- Voting in October 2006

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