



Transformers

Reduced emission painting
for transformers
Lower volatile organic compound
painting systems

Energy efficient products and solutions

With ever growing populations and global concerns about climate change, ABB provides energy efficient products and solutions to reduce environmental impact. More than ever, the need for energy efficient products is eminent. ABB's transformers support the systems that keep our world running. With over 55 manufacturing sites globally, ABB is the largest transformer manufacturer worldwide. With its broad range of power and distribution transformers, components and services, ABB is taking its responsibility as one of the industry leaders very serious.

ABB transformers equate with reliability, flexibility, high performance and efficiency. Our green transformer programs stand for efficiency, environment and economy. They are built to reduce energy losses, improve energy efficiency, battle environmental impact and increase overload-ability

Our responsibility

ABB is committed to developing resource efficient products and systems and to conducting ongoing dialogue with customers to help select the most environmentally sustainable products, systems and solutions. Our transformer operations conduct themselves in an environmentally sound manner by applying environmental management systems that encourage manufacturing sites, suppliers and subcontractors to adopt environmental standards. These standards become the benchmark by which we hold our facilities accountable.

ABB has worked intensively to reduce its overall emissions and specifically the volatile organic compounds (VOC) emissions of our transformer manufacturing processes. The goal is to decrease the emissions as a result of transformer painting significantly in the next couple of years.

Targeted VOC emission reduction 2010-2012 (VOC reduction project team)

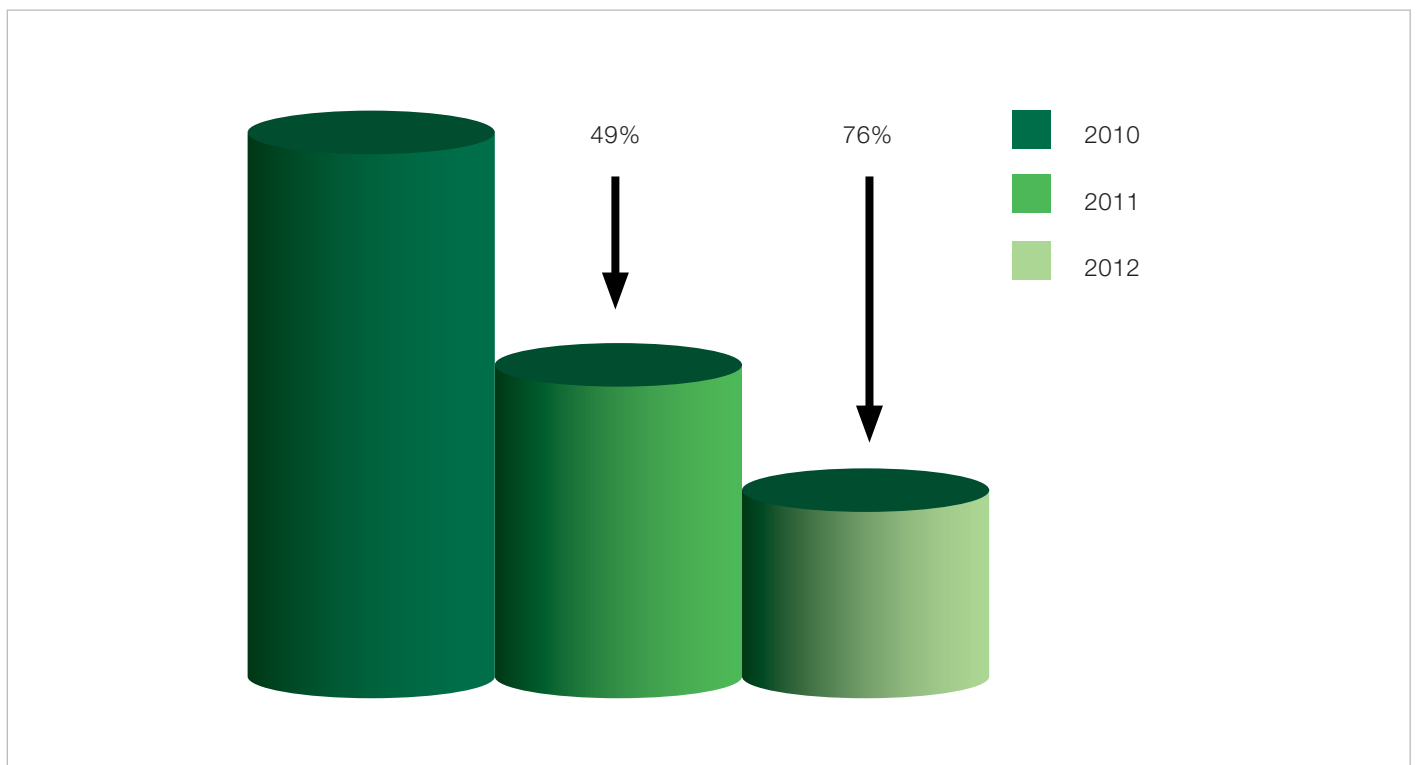


ABB transformers are designed to last many years, they are installed in various environments that can be anything from a clean, heated, indoor installation to open deck installations offshore.

Our answer

As part of this continuous focus on making our operations as environmentally friendly as possible we are introducing lower VOC painting systems into our transformer manufacturing sites.

Conventional paints emit VOC which react with other pollutants and sunlight to form harmful ground-level ozone and other oxidants known as smog which give rise to a variety of health problems and environmental problems. With experience from 10 year use of reduced VOC paints on some of our power transformers, ABB is now introducing reduced VOC systems as a standard for all our transformers. By switching our transformer manufacturing plants to lower VOC painting systems, We are reducing harmful solvent emissions and also lowering the energy costs involved in the application and drying of paints.

ABB transformers are designed to last many years in various environments. The installation environment can be anything from a clean, heated, indoor installation to open deck installations offshore. In conjunction with our approved suppliers, we have developed standards based on the ISO standard 12944 -2 corrosivity categories which promote reduced VOC painting. By using ISO 12944-2, it is possible to globally standardize the available paint systems across all manufacturing sites and secure quality from our sub-suppliers of painted components.

Corrosion classes	Typical exterior environments	Typical interior environments
C1	-	Heated buildings with clean atmospheres e.g. offices, schools, shops, hotels
C2	Atmospheres with low level pollution mostly rural areas	Unheated buildings, where condensation may occur e.g. depots, warehouses, sports halls.
C3	Urban and industrial atmospheres, moderate sulfur dioxide pollution. Coastal areas with low salinity.	Production rooms with high humidity and some air pollution (food processing plants, laundries, breweries, dairies).
C4	Industrial areas and coastal areas with moderate salinity.	Chemical plants, swimming pools, coastal shipyards.
C5-I	Industrial areas with high humidity and aggressive atmosphere.	Buildings or areas with almost permanent condensation and high pollution.
C5-M	Coastal and offshore areas with high salinity.	Buildings or areas with almost permanent condensation and high pollution.

Source ISO 12944-2, Paints and varnishes – Corrosion protection of steel structures by protective paint systems - Part 2 Classification of environment

Our new generation of distribution transformers effectively reduces CO₂ emissions minimizing their environmental impact. This results in energy savings, lower operating costs and a reduced environmental impact. As a further environmental enhancement, our transformers will be painted using lower VOC content painting systems.

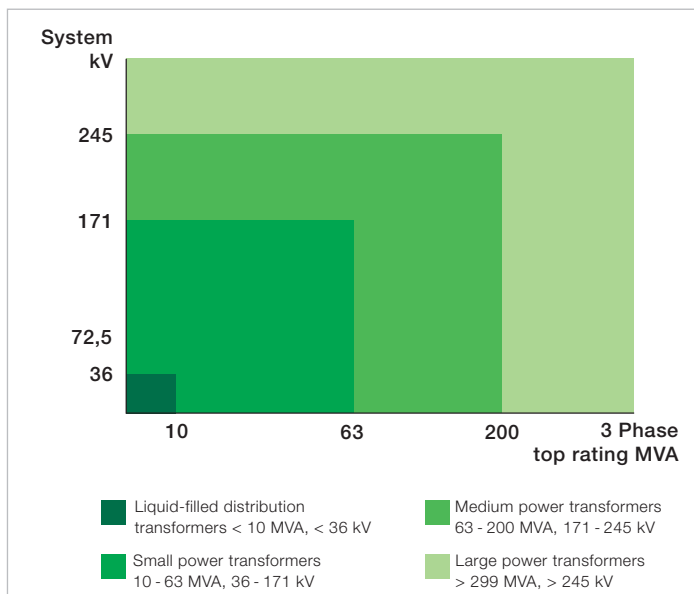


Our transformer operations reduce harmful solvent emissions – ABB VOC associated product offering

ABB expects that by 2012 all transformer operations or tank sub-suppliers will be equipped with reduced VOC painting system so that any transformer shipped out from any plant regardless of size, from small distribution up to large power transformers, whichever applications or installation environment it has been built for, will be painted according to the most advanced painting system minimizing the overall VOC emissions.

Benefits

- Customers will be prepared for planned, more stringent legislation regarding emissions
- Reduced manufacturing and delivery time for transformers
- Standardization of paint systems on ISO standard 12944 across all manufacturing sites
- Modern robust paint systems engineered to give proven protection



Contact us

ABB Management Services Ltd.

Transformers

Affolternstrasse 44

PO Box 8131

8050 Zurich, Switzerland

www.abb.com/transformers

Note:

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