

GLOBAL SUMMARY REPORT
Market for High Voltage
Insulators & Bushings

2010 - 2015 - 2025

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October 2016

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1. INTRODUCTION

1.1 Objective and Scope

The objective of this report is to provide a concise overview of the global high voltage insulator and bushings market for the period 2010 to 2025. The report gives an estimate of the value of high voltage insulator consumption and high voltage bushings consumption in each national market, broken down into; insulators made from glass, ceramic and composite materials, and bushings for transformers and switchgear. The data given are 2010 to 2014, actual market values and estimated 2015 to 2025 market values.

For the purposes of this report the term high voltage insulator is used to describe electric insulators, for use in the electricity transmission and distribution industry, split into three main segments:

- Electric Insulators of glass
- Electric Insulators of ceramics
- Electric Insulators of composite material

Bushings are divided by application and are split into three main segments:

- Bushings for Transformers
- Bushings for Switchgear
- Other Bushings

The scope for this report is global - that is, every country having a significant high voltage insulator customer base. The report is designed to be used as a first-line planning tool by companies interested in the global market for insulators and insulator products and as a screen on which to identify national markets worthy of further investigation.

1.2 Methodology

Data in the markets report are presented in millions of US dollars.

The survey was based primarily on desk research, including a review of available published production and trade statistics. Import and export figures are calculated from national and United Nations' figures for 2010 to 2013 - the most comprehensive and up-to-date statistics available. Market values are assumed to be equal to Production + (Imports - Exports). National production estimates are based on statistics provided by national governments and trade associations. They are also derived from an analysis of the size and location of known production plants. Market sizes for 2015 to 2025 are estimated by analysing the pattern of market size growth over the period up to 2014.

Market values are at factory gate prices - they reflect the prices for the products by the importer and do not include trade mark-ups and installation costs. It should be noted that published classifications of products, especially with respect to trade statistics, are sometimes inaccurate, as products may be shipped under generic titles.

It should also be noted that Goulden Reports chronicles shipments rather than contracts. A contract to supply goods over a number of years will not appear as a one-off event in a Goulden Reports publication, but rather will be recorded from the trade statistics. The nature of the market means that demand within countries, especially developing ones, can fluctuate greatly from year to year as purchases are often made on a one-off basis rather than spread evenly over a number of years.

Within national markets, where published figures were unavailable to us, the breakdown between different product categories is based on intelligence based on the pattern of consumption in the country concerned. In these cases the breakdown is made from an estimate of the total market size rather than the value of the entire market being calculated from the individual product categories.

Figures for non-UN countries are based on data obtained from individual countries and are consequently not necessarily comparable with UN-derived information. Clearly the report is only as accurate as the information upon which it draws - the sources are regarded as being the best and most comprehensive available.

There are no reliable production, import or export statistics for bushings and unlike insulators the purchasers are not electrical utility companies but are OEM (Original Equipment Manufacturers) companies producing transformers and switchgear. There is international trade in bushings but the vast majority of these products are imported and exported as integral parts of the finished products.

A percentage of the sales of insulators are hollow insulators that are used in the production of bushings. Some insulator manufacturers have vertically integrated production and do produce bushings, but the increasing trend is for insulators to be sold to bushings manufacturers, or transformer and switchgear manufacturers that produce bushings for their own consumption.

Therefore the markets for Bushings are calculated using a different methodology.

For the purposes of this report the supply chain is less important than the end-market data. We have therefore compiled separate market estimates for insulators and bushings. A part of the market for insulators is derived from bushing manufacturers and our market estimates for

insulators include this demand, but at insulator manufacturers factory gate prices. Separate to this we have provided estimates for the market for bushings, which is generally limited to those countries where transformers, switchgear and lightning arresters are produced.

We have recently produced two other world market reports:

The World Market for Transformers

The World Market for High Voltage Switchgear

Our estimates for the market for bushings are derived from these reports and the production of these products given in them. These estimates have been, where possible, cross checked against the production of insulators and the production of bushings.

The future market developments to 2025 have been assessed using three methods. Firstly, the published development plans of the electrical utility sector. Secondly; qualitatively, by canvassing the views of market players, and thirdly by assessing the replacement markets that are developing as a result of retiring old plant and equipment.

The results of this analysis are produced in the following pages.