The World Market for High Voltage Insulators & Bushings

2010 - 2020

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The World Market for HV Insulators & Bushings, 2010 - 2020
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 2020. 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 2005 to 2011, actual market values and estimated 2012 to 2020 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 2005 to 2007 - 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 2008 are estimated by analysing the pattern of market size growth over the period 2002 -2007.

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 lightening 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 2020 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.
1.3 Summary

- The global market for High Voltage Insulators was valued at US$xxxxx million in 2010.
- The largest national market in 2010 was that of xxxxxxx, which was valued at US$xxxxx million and which accounted for over xxx% of the overall world market.
- The second largest national market was that of xxxx (US$xxxxx million) followed by the xxxxx (US$xxxxx million) and xxxx (US$xxxxx million).
- The largest regional market for High Voltage Insulators in 2010 was Western Europe (US$xxxxx million) followed by Asia (US$xxxxx million) and North America (US$xxxxx million).
- During the period 2005 to 2010 most regions have shown a good growth of between xxx% and xxx% cagr. Western Europe, Eastern Europe and the Former Soviet Union have all progressed at this level. The Americas have only grown at about half of this rate but some regions of Africa have shown over xxx% growth.
- We forecast that the both the Indian Continent and the Far East – headed by China - will show the greatest growth until 2015 with regional growth of xxx%, xxx% and xxx% cagr respectively expected. The Middle East will grow at up to xxx% and Central America and the Caribbean will exceed xxx% growth. Growth rates of xxx%, xxxx%, xxx% and xxx% respectively are forecast for the period 2015 to 2020.
- Global production of High Voltage Insulators is dominated by the Seves Group with sales estimated to be US$xxx million in 2010 a global market share of xxx%. NGK follows with estimated sales of US$xxx million (xxx%), these two are followed by the Lapp group, Furukawa and Siemens. The top 4 producers have xxx% market share.
- The world market for bushings is estimated to be worth US$xxxxx million in 2010 and will grow at xxxx% cagr between 2010 and 2015 and xxx% between 2015 and 2020.
- The largest regional market for bushings is the Far East which is valued at US$xxxxx million; followed by Western Europe at US$xxxxx million.
- The largest national market in 2010 was China US$xxxxx million, followed by the USA US$xxxxx million and Germany US$xxxxx million.
- The largest producer of high voltage bushings in 2010 was Siemens (including the acquired Trench group) estimated to be producing US$xxxxx million, xxx% of the world market, just displacing the ABB group into second place with US$xxxxx million and xxx% market share. The top 5 producers combined share xxx% of the market.
1.4 Summary Charts

Chart 1

World Market for Insulators by Type

![Graph showing the global market for insulators by type from 2005 to 2010 with values in US$ million. The graph displays the market share for glass, ceramic, and composite insulators.]
Chart 2

World Market for Insulators by Type 2010

- Ceramic: 48.9%
- Composite: 39.0%
- Glass: 12.0%
Chart 3
World Market by Region 2015 & 2020
Chart 4

Glass Exports Value v Costs per Unit 1990 to 2010
Chart 5
Ceramic Exports Value v Costs per Unit 1990 to 2010
Chart 6
Composite Exports Value v Costs per Unit 1990 to 2010
### 1.5 Summary Tables

Table 1

The Fastest Growing National Markets for High Voltage Insulators
2005 - 2010 (US$ Thousand)

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size 2010</th>
<th>% Change 2005-2010</th>
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</table>

Source: Goulden Reports and United Nations

Note: Only countries with market sizes greater than US$20 million are included in this section. Smaller markets may display significantly larger percentage changes.
Table 2
The Fastest Growing National Markets for High Voltage Bushings
2005 - 2010 (US$ Million)

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size 2010</th>
<th>% Change 2005-2010</th>
</tr>
</thead>
</table>

Source: Goulden Reports and United Nations

Note: Only countries with market sizes greater than US$2 million are included in this section. Smaller markets may display significantly larger percentage changes.
### Table 3
The Fastest Declining National Markets for High Voltage Insulators
2005 - 2010 (US$ Thousand)

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size 2010</th>
<th>% Change 2005-2010</th>
</tr>
</thead>
</table>

Source: Goulden Reports and United Nations

Note: Only countries with market sizes greater than US$20 million are included in this section. Smaller markets may display significantly larger percentage changes.
Table 4
The Fastest Declining National Markets for High Voltage Bushings
2005-2010 (US$ Million)

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size 2010</th>
<th>% Change 2005-2010</th>
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Source: Goulden Reports and United Nations

Note: Only countries with market sizes greater than US$2 million are included in this section. Smaller markets may display significantly larger percentage changes.
### Table 5

The Largest National Markets for High Voltage Insulators, 2010 (US$ Thousands)

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size 2010</th>
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Source: Goulden Reports and United Nations

### Table 6

The Largest National Markets for High Voltage Glass Insulators, 2010 (US$ Thousand)

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size 2010</th>
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Source: Goulden Reports and United Nations
Table 7
The Largest National Markets for High Voltage Ceramic Insulators, 2010 (US$ Thousand)

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<th>Country</th>
<th>Market Size 2010</th>
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Source: Goulden Reports and United Nations

Table 8
The Largest National Markets for High Voltage Composite Insulators, 2010 (US$ Thousand)

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<th>Country</th>
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Source: Goulden Reports and United Nations
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The Largest National Markets for High Voltage Bushings, 2010 (US$ Million)

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<th>Country</th>
<th>Market Size 2010</th>
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Source: Goulden Reports and United Nations

Table 10
The Largest National Markets for High Voltage Transformer Bushings, 2010 (US$ Thousand)

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<th>Country</th>
<th>Market Size 2010</th>
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Source: Goulden Reports and United Nations
Table 11

The Largest National Markets for High Voltage Switchgear Bushings, 2010 (US$ Thousand)

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<th>Country</th>
<th>Market Size 2010</th>
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Source: Goulden Reports and United Nations
2. THE WORLD MARKET

Table 12

<table>
<thead>
<tr>
<th>Region</th>
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Source: Goulden Reports and United Nations
### Table 13

<table>
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<tr>
<th>Region</th>
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<th>2020</th>
<th>Annual Average Growth</th>
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<tr>
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Source: Goulden Reports and United Nations
Table 14
The World Market for High Voltage Insulators, by Region, by Product, 2010 (US$ Thousand)

<table>
<thead>
<tr>
<th>Region</th>
<th>Glass</th>
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Source: Goulden Reports and United Nations
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Source: Goulden Reports and United Nations
Table 16
The World Market for High Voltage Bushings, by Region, 2015 – 2020 (US$ Million)

<table>
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<tr>
<th>Region</th>
<th>2015</th>
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<th>Annual Average Growth</th>
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Source: Goulden Reports and United Nations
Table 17
The World Market for High Voltage Bushings, by Region, by Product, 2010 (US$ Million)

<table>
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<tr>
<th>Region</th>
<th>Transformer Bushings</th>
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</table>

Source: Goulden Reports and United Nations
3. **THE WORLD’S MANUFACTURERS**

The tables in the following section are calculated from published annual company reports, sales breakdowns, regional sales figures and other official sources. The figures are, however, designed to serve as a general overview – inaccuracies may occur as a result of exchange rate fluctuations or insufficient primary data.

**Table 18**

**Leading Manufacturers’ Sales of High Voltage Insulators by Region, 2010 (US$ Million)**

<table>
<thead>
<tr>
<th>Company</th>
<th>Western Europe</th>
<th>Eastern Europe &amp; FSU</th>
<th>Africa</th>
<th>Middle East</th>
<th>South Asia</th>
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</table>

Source: Goulden Reports
Table 19 continued

Leading Manufacturers’ Sales of High Voltage Insulators by Region, 2010 (US$ Million)

<table>
<thead>
<tr>
<th>Company</th>
<th>Far East &amp; Oceania</th>
<th>South &amp; Central America</th>
<th>North America</th>
<th>Total Sales</th>
</tr>
</thead>
</table>

Source: Goulden Reports
Table 19

Leading Manufacturers’ Sales of High Voltage Bushings by Region, 2010 (US$ Million)

<table>
<thead>
<tr>
<th>Company</th>
<th>Western Europe</th>
<th>Eastern Europe &amp; FSU</th>
<th>Africa</th>
<th>Middle East</th>
<th>South Asia</th>
</tr>
</thead>
</table>

Source: Goulden Reports
Table 20 continued

Leading Manufacturers’ Sales of High Voltage Bushings by Region, 2010 (US$ Million)

<table>
<thead>
<tr>
<th>Company</th>
<th>Far East &amp; Oceania</th>
<th>South &amp; Central America</th>
<th>North America</th>
<th>Total Sales</th>
</tr>
</thead>
</table>

Source: Goulden Reports
3.1 CONTACT INFORMATION FOR LEADING MANUFACTURERS

The following is a list of the headquarters of the leading high voltage insulator manufacturers.

**ABB Ltd**

PO Box 8131  
8050 Zurich  
SWITZERLAND  
Tel: +41 1 317 7111  
Fax: +41 1 317 4420  
Website: www.abb.com

**Lapp Insulators**

Bahnhofstrasse 43,  
D-96257 Redwitz,  
GERMANY  
Tel: +49 9574-81 205  
Fax: +49 9574-81 601  
Website: www.lappinsulators.com

**BHEL - Bharat Heavy Electricals Ltd**

BHEL House  
Siri Fort  
New Delhi  110049  
INDIA  
Tel: +91 11 436 8996  
Fax: +91 11 436 7130  
Website: www.bhel.com

**CELECO**

Blvd Carlos Salinas de Gortari Km 9.25  
Apodaca NL  
CP 66600  
MEXICO  
Tel: + 52 81 80302000  
Website: www.celeco.com.mx
Comem
S.S. 11, Km 338,
I-36054 Montebello,
Vicentino (Vicenza),
ITALY
Tel: +39 0444-449 311
Fax: +39 0444-449 352 / 440 359
Website: www.comem.com

Elektroporcelan Louny as
Postoloprtska 2685
Louny 44015
CZECH REPUBLIC
Tel: +420 415 622111
Fax: +420 415 622112
Website: www.epl.cz

Furukawa Electric Co
6-1 Marunouchi 2 chome
Chyoda Ku
Tokyo 100
JAPAN
Tel: +81 3 3286 3001
Fax: +81 3 3286 3747
Website: www.furukawa.co.jp

GE Prolec S de RL de CV
Blvd Pdte Carlos Salinas de Gortari
Km 9.25
Apodaca NL
MEXICO
Tel: +1 81 8030 200
Fax: +1 81 8030 2222
Website: www.prolecege.com

Global Insulator Group
98, Khokhryakov Str.,
Ekaterinburg,
Russia, 620144
Tel: +7 (343) 216-35-77,
Fax: +7 (343) 216-35-84
Website: www.gig-group.com
HSP Hochspannungsgerate Porz GmbH
Kaiserstrasse 127
51145 Köln
GERMANY
Tel: +49 2203 30050
Website: www.hspkoeln.de

Hubbell Power Systems
1850 Richland Avenue E.
Aiken
South Carolina 29801
UNITED STATES
Tel: +1 803-648-8386
Fax: +1 803-642-2959
Website: www.hubbellpowersystems.com

Isoladores Santana
Rua Antonio Pedro, 645, Centro,
CEP 13.920.000
Pedreira - SP,
BRAZIL
Tel: +55 19-3893-9200
Fax: +55 19-3893-2122
Website: www.isantana.com.br

Japan AE Power Systems Corp
Landic Shimbashi Building
8-3 Nishi-Shimbashi
3 Chome, Minato ku
Tokyo 105 0003
JAPAN
Website: www.jaeps.com

Lapp Insulator Co
130 Gilbert Street
Le Roy
NY 14482-1393
USA
Tel: +1 716 768 6221
Fax: +1 716 768 6219
Website: www.lappinsulator.com

Lviv Insulator Company
301 Zelena Street
79066 Lviv
UKRAINE
Tel: +380 322 781325  
Fax: +380 322 404250  
Website: www.energyglass.com.ua

Maclean Power Systems
1141 Addison street
Franklin Park
Illinois 60131
USA
Tel: +1 847 455 0014  
Fax: +1 847 455 0029  
Website: www.maclean-power.com

Modern Insulators
P.O. Box 23, 
Abu Road,  
Rajasthan 307 026, 
INDIA
Tel: +91 2974-228044 or 228047/220503  
Fax: +91 2974-228043/221098  
www.modern-group.com

NGK Insulators Ltd
2-56, Suda-cho  
Mizuho-ku 
Nagoya 467-8530 
JAPAN
Tel: +81 52 872 7171 
Fax: +81 52 872 7690 
Website: www.ngk.co.jp

Areva - Passoni & Villa
V.le Suzzani 229
20162 Milano
ITALY
Tel: +39 02 661221 
Fax: +39 02 6470906 
Website: www.passoni-villa.com

PPC Porcelain Products
225 N. Patterson Street, 
Carey, 
Ohio 43316, 
UNITED STATES
Tel: +1 419-396-7621
Fax: +1 419-396-7128/7428
Website: www.ppcinsulators.com

Saint Gobain La Granja
Paseo de la Castellana, 77,
E-28046 Madrid,
SPAIN
Tel: +34 91-397 2470
Fax: +34 91-397 2226
Website: www.saintgobainlagranja.es

SEVES SA
79, Avenue François Arago
92017 Nanterre Cedex
FRANCE
Tel: +33 1 46 14 15 16
Fax: +33 1 40 97 04 33
Website: www.seves.com

Siemens AG
Wittelsbacherplatz 2
80333 Munich
GERMANY
Tel: +49 89 636-00
Fax: +49 89 636 34242
Website: www.siemens.com

Toshiba Corporation
1-1, Shibaura 1-chome
Minato-ku
Tokyo 105-8001
JAPAN
Tel: +81 3 3457 2096
Fax: +81 3 5444 9202
Website: www.toshiba.co.jp

Siemens Canada
Bushings Division
432 Monarch Ave
Ajax, Ont L1S 2G7
CANADA
Tel: +1 905 426 2665
Fax: +1 905 426 2671
Website: www.trenchgroup.com
Tyco Electronics
Axicom AG
Wilerzelgstrasse 17
CH 5610 Wohlen
SWITZERLAND
Tel: +41 56 618 1286
Fax: +41 56 618 1296
Website: www.energy.tycoelectronics.com

Victor Insulators Inc
280 Maple Avenue
Victor NY
New York
USA
Tel: +1 585 924 2127
Fax: +1 585 924 7906
Website: www.victorinsulators.com
4. REGIONAL MARKETS

4.1 WESTERN EUROPE

4.1.1 Insulators

Table 20
Western Europe: The Market for High Voltage Insulators, by Country, 2005 - 2010 (US$ Thousands)

<table>
<thead>
<tr>
<th>Country</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<th>2009</th>
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Source: Goulden Reports and United Nations

<table>
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<tr>
<th>Country</th>
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Source: Goulden Reports and United Nations
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**Total**

Source: Goulden Reports and United Nations
### 4.1.2 Bushings

Table 23

Western Europe: The Market for High Voltage Bushings, by Country, 2005 - 2010 (US$ Million)

<table>
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<tr>
<th>Country</th>
<th>2007</th>
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<th>2011</th>
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Source: Goulden Reports and United Nations
Table 24


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<th>Country</th>
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<th>Annual Average Growth</th>
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Total

Source: Goulden Reports and United Nations
Table 25  

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<th>Country</th>
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<th>Switchgear Bushings</th>
<th>Other Bushings</th>
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Source: Goulden Reports and United Nations
4.2 EASTERN EUROPE

As per W Europe

Follows all other regions in same format
5. PRODUCTION

Table 26
The Top 25 Producers of High Voltage Insulators, 2010 (US$ Million)

<table>
<thead>
<tr>
<th>Country</th>
<th>Production</th>
<th>% of World Total</th>
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Source: Goulden Reports
Table 27

The Top Producers of High Voltage Glass Insulators, 2010 (US$ Million)

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<tr>
<th>Country</th>
<th>Production</th>
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Source: Goulden Reports
### Table 28
The Top 25 Producers of High Voltage Ceramic Insulators, 2010 (US$ Million)

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<th>Country</th>
<th>Production</th>
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Source: Goulden Reports
Table 29

The Top 25 Producers of High Voltage Composite Insulators, 2010 (US$ Million)

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<th>Country</th>
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Source: Goulden Reports
Table 30
The Top 25 Producers of High Voltage Bushings, 2010 (US$ Million)

<table>
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<tr>
<th>Country</th>
<th>Production</th>
<th>% of World Total</th>
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Source: Goulden Reports
6. TRADE ANALYSIS

7. DIRECTORY OF MANUFACTURERS

NB. In this section original company names are left unchanged to show the historical perspective
8. APPENDICES