Thermal Barrier Coatings Market Research Report- by Product (Metal, Ceramic and Intermetallic), Technology (High Velocity Oxygen Fuel, Electron-Beam Physical Vapor Deposition) by Application (Stationary Power Plants, Automotive) – Forecast till 2023

Synopsis of Thermal Barrier Coatings Market:

Thermal Barrier Coatings are used to protect material surface from heat loss at elevated temperatures. They are manufactured by various raw materials such as polymers, epoxy resins, aluminates, and others. They offer good corrosion resistance and impart phase stability between room and elevated temperatures. These coatings are applied to increase the durability and performance of the equipment. Owing to these factors, they are used in various applications such as stationary power plants, automotive, aerospace, aviation, and others.

As per our Analysis, the Global Thermal Barrier Coatings Market is bifurcated into the product, technology and applications. The market by product is further divided into metal, ceramic, intermetallic. Among these, the ceramic segment holds the major portion of the market on account of its growing use in end-use industries such as aviation, aerospace, marine, and others as it provides thermal resistance and protection in high temperature processing applications. The yttria – stabilized zirconia is the most widely used ceramic type in the market due to excellent stability offered by the product. Therefore, the extensive consumption of this segment is estimated to drive the market in the couple of years. The high velocity oxygen fuel, electron-beam physical vapor deposition, chemical vapor deposition, and air plasma segments are classified on the basis of technology in the market. Among these, the high velocity oxygen fuel segment is predicted to witness a rapid growth in the market due to unique features offered by the product such as strength, wear and corrosion resistance. Moreover, the growing use of this technology in thermal resistant coatings is set to drive the market during the assessment period. Stationary power plants, automotive, aerospace, aviation, and others are segregated on the basis of end-use segment. Among these, stationary power plants is the leading segment due to boundless use of coatings in gas turbines that are operating at higher temperatures. Moreover, the extensive consumption of thermal paints in automotive industry is projected to drive the market during the forecast period, 2017-2023.

The Global Thermal Barrier Coatings Market Share by Application:
Regional Analysis:

The Thermal Barrier Coatings Market is segmented across five regions in the world namely Asia Pacific, North America, Europe, Latin America, and the Middle East & Africa. Among these, Asia Pacific holds a major share of the market due to the growing demand for thermal barrier materials in stationary power plants, automotive, industrial, energy and others. The automotive segment is predicted to witness a rapid growth in the market, due to the growing consumption of ceramic product to produce high standard and efficient vehicles in countries such as China, Japan and India. Owing to these factors, they are the major players in the market.

The North American region is growing significantly in the market due to the increasing demand for ceramic and epoxy coatings in construction and buildings and automobile sectors. It is predicted that the growing investments and technological advancement is set to drive the market during the forecast period. The growing demand of protection coatings in aerospace, aviation industries has propelled the countries such as the U.S., Canada and Mexico to achieve a stunning growth in the market.

European market has observed a remarkable growth in the market due to rapid urbanization coupled with technology. It is estimated that the vast use of thermal paint in the end-use industries has propelled the countries such as the U.K., Italy, Germany and France to observe a notable growth in the market during the forecast period.

The Latin American region is estimated to witness a recognized development in the market due to growing consumption of thermal pants in aerospace, stationary plants, and energy sectors. Moreover, the Middle East & Africa is anticipated to witness a higher growth in the market due to increasing demand for thermal insulation materials in automotive, industrial and aviation sectors.

Segmental Analysis:

The Global Thermal Barrier Coatings Market is segmented into product, technology and application. On the basis of product, the market is further categorized into metal, ceramic, intermetallic. Among these, the ceramic segment holds a majority of the market share due to its extraordinary features offered by the product such as antioxidant, wear and corrosion resistance. Due to these factors, yttria – stabilized zirconia is the most popular ceramic type in the end-use industries. The market by technology is further categorized into high velocity oxygen fuel, electron-beam physical vapor deposition, chemical vapor deposition, air plasma segments. Among these, the high velocity oxygen fuel segment is accounted for major share in the market due to extensive use of this technology in thermal paints to impart durable and reliable nature to the product. Moreover, the success achieved in the research and development activities has fueled the market in the last couple of years. Stationary power plants, automotive, aerospace, aviation, and others are segregated on the basis of end-use segment. The stationary power plants is the leading segment in the market owing to extensive consumption of thermal paints in gas turbines, and others. Therefore, it is predicted that
the automotive segment is set to grow at a higher rate due to growing consumption of ceramic
coatings in automobile and aviation sectors.

Key Players:

Some of the prominent players operating in the Global Thermal Barrier Coatings Market are Praxair
Surface Technologies, Inc (U.S.), Metallisation Ltd (U.K), Flame Spray Coating Co. (U.S.),
Metallizing Equipment Co. Pvt. Ltd (India), Air Products and Chemicals, Inc. (U.S.), Precision
Coatings, Inc (U.S), ASB Industries, Inc. (U.S.), CTS (U.S.), H.C. Starck GmbH (U.S.), and
THERMION (U.S.A), among others.

Geographical Analysis:

The report covers brief analysis of the major geographic regions namely Asia Pacific, Europe, North
America, Latin America, and the Middle East & Africa.

Intended Audience

- Thermal Barrier Coatings Manufacturers
- Traders and Distributors of Thermal Barrier Coatings
- Production Process Industries
- Potential Investors
- Raw Material Suppliers
- Nationalized Laboratory

Contents:

<table>
<thead>
<tr>
<th>Contents</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents:</td>
<td></td>
</tr>
<tr>
<td>1 Executive Summary</td>
<td></td>
</tr>
<tr>
<td>2 Scope of the Report</td>
<td></td>
</tr>
<tr>
<td>2.1 Market Definition</td>
<td></td>
</tr>
<tr>
<td>2.2 Scope of the Study</td>
<td></td>
</tr>
<tr>
<td>2.2.1 Research Objectives</td>
<td></td>
</tr>
<tr>
<td>2.2.2 Assumptions &amp; Limitations</td>
<td></td>
</tr>
<tr>
<td>2.3 Markets Structure</td>
<td></td>
</tr>
<tr>
<td>3 Market Research Methodology</td>
<td></td>
</tr>
<tr>
<td>3.1 Research Process</td>
<td></td>
</tr>
<tr>
<td>3.2 Secondary Research</td>
<td></td>
</tr>
<tr>
<td>3.3 Primary Research</td>
<td></td>
</tr>
<tr>
<td>3.4 Forecast Model</td>
<td></td>
</tr>
<tr>
<td>4 Market Landscape</td>
<td></td>
</tr>
<tr>
<td>4.1 Five Forces Analysis</td>
<td></td>
</tr>
<tr>
<td>4.1.1 Threat of New Entrants</td>
<td></td>
</tr>
<tr>
<td>4.1.2 Bargaining power of buyers</td>
<td></td>
</tr>
<tr>
<td>4.1.3 Threat of substitutes</td>
<td></td>
</tr>
<tr>
<td>4.1.4 Segment rivalry</td>
<td></td>
</tr>
<tr>
<td>4.2 Value Chain/Supply Chain of Global Thermal Barrier Coatings Market</td>
<td></td>
</tr>
<tr>
<td>5 Industry Overview of Global Thermal Barrier Coatings Market</td>
<td></td>
</tr>
<tr>
<td>5.1 Introduction</td>
<td></td>
</tr>
<tr>
<td>5.2 Growth Drivers</td>
<td></td>
</tr>
<tr>
<td>5.3 Impact analysis</td>
<td></td>
</tr>
<tr>
<td>5.4 Market Challenges</td>
<td></td>
</tr>
<tr>
<td>6 Market Trends</td>
<td></td>
</tr>
<tr>
<td>6.1 Introduction</td>
<td></td>
</tr>
<tr>
<td>6.2 Growth Trends</td>
<td></td>
</tr>
</tbody>
</table>
6.3 Impact analysis

7. Global Thermal Barrier Coatings Market by Product

7.1 Introduction

7.2 Metallic

7.2.1 Market Estimates & Forecast, 2017-2023

7.2.2 Market Estimates & Forecast by Region, 2017-2023

7.3 Ceramic

7.3.1 Market Estimates & Forecast, 2017-2023

7.3.2 Market Estimates & Forecast by Region, 2017-2023

7.4 Intermetallic

7.4.1 Market Estimates & Forecast, 2017-2023

7.4.2 Market Estimates & Forecast by Region, 2017-2023

8. Global Thermal Barrier Coatings Market by Technology

8.1 Introduction

8.2 High velocity oxygen fuel

8.2.1 Market Estimates & Forecast, 2017-2023

8.2.2 Market Estimates & Forecast by Region, 2017-2023

8.3 Electron-beam physical vapor deposition

8.3.1 Market Estimates & Forecast, 2017-2023

8.3.2 Market Estimates & Forecast by Region, 2017-2023

8.4 Chemical vapor deposition

8.4.1 Market Estimates & Forecast, 2017-2023

8.4.2 Market Estimates & Forecast by Region, 2017-2023

8.5 Air plasma

8.5.1 Market Estimates & Forecast, 2017-2023

8.5.2 Market Estimates & Forecast by Region, 2017-2023

9. Global Thermal Barrier Coatings Market by Application

9.1 Introduction

9.2 Stationary power plants

9.2.1 Market Estimates & Forecast, 2017-2023

9.2.2 Market Estimates & Forecast by Region, 2017-2023

9.3 Automotive

9.3.1 Market Estimates & Forecast, 2017-2023

9.3.2 Market Estimates & Forecast by Region, 2017-2023

9.4 Aerospace

9.4.1 Market Estimates & Forecast, 2017-2023

9.4.2 Market Estimates & Forecast by Region, 2017-2023

9.5 Aviation

9.5.1 Market Estimates & Forecast, 2017-2023

9.5.2 Market Estimates & Forecast by Region, 2017-2023

9.6 Others

9.6.1 Market Estimates & Forecast, 2017-2023

9.6.2 Market Estimates & Forecast by Region, 2017-2023

10. Global Thermal Barrier Coatings Market by Region

10.1 Introduction

10.2 North America

10.2.1 Market Estimates & Forecast, 2017-2023

10.2.2 Market Estimates & Forecast by Product, 2017-2023
10.2.3 Market Estimates & Forecast by Technology, 2017-2023
10.2.4 Market Estimates & Forecast by Application, 2017-2023
10.2.5 U.S.
10.2.5.1 Market Estimates & Forecast, 2017-2023
10.2.5.2 Market Estimates & Forecast by Product, 2017-2023
10.2.5.3 Market Estimates & Forecast by Technology, 2017-2023
10.2.5.4 Market Estimates & Forecast by Application, 2017-2023
10.2.6 Mexico
10.2.6.1 Market Estimates & Forecast, 2017-2023
10.2.6.2 Market Estimates & Forecast by Product, 2017-2023
10.2.6.3 Market Estimates & Forecast by Technology, 2017-2023
10.2.6.4 Market Estimates & Forecast by Application, 2017-2023
10.2.7 Canada
10.2.7.1 Market Estimates & Forecast, 2017-2023
10.2.7.2 Market Estimates & Forecast by Product, 2017-2023
10.2.7.3 Market Estimates & Forecast by Technology, 2017-2023
10.2.7.4 Market Estimates & Forecast by Application, 2017-2023
10.3 Europe
10.3.1 Market Estimates & Forecast, 2017-2023
10.3.2 Market Estimates & Forecast by Product, 2017-2023
10.3.3 Market Estimates & Forecast by Technology, 2017-2023
10.3.4 Market Estimates & Forecast by Application, 2017-2023
10.3.5 Germany
10.3.5.1 Market Estimates & Forecast, 2017-2023
10.3.5.2 Market Estimates & Forecast by Product, 2017-2023
10.3.5.3 Market Estimates & Forecast by Technology, 2017-2023
10.3.5.4 Market Estimates & Forecast by Application, 2017-2023
10.3.6 France
10.3.6.1 Market Estimates & Forecast, 2017-2023
10.3.6.2 Market Estimates & Forecast by Product, 2017-2023
10.3.6.3 Market Estimates & Forecast by Technology, 2017-2023
10.3.6.4 Market Estimates & Forecast by Application, 2017-2023
10.3.7 Italy
10.3.7.1 Market Estimates & Forecast, 2017-2023
10.3.7.2 Market Estimates & Forecast by Product, 2017-2023
10.3.7.3 Market Estimates & Forecast by Technology, 2017-2023
10.3.7.4 Market Estimates & Forecast by Application, 2017-2023
10.3.8 Spain
10.3.8.1 Market Estimates & Forecast, 2017-2023
10.3.8.2 Market Estimates & Forecast by Product, 2017-2023
10.3.8.3 Market Estimates & Forecast by Technology, 2017-2023
10.3.8.4 Market Estimates & Forecast by Application, 2017-2023
10.3.9 U.K
10.3.9.1 Market Estimates & Forecast, 2017-2023
10.3.9.2 Market Estimates & Forecast by Product, 2017-2023
10.3.9.3 Market Estimates & Forecast by Technology, 2017-2023
10.3.9.4 Market Estimates & Forecast by Application, 2017-2023
10.3.10 Rest of Europe
List of Tables:

Table 1 World Population by Major Regions (2017 To 2030)
Table 2 Global Thermal Barrier Coatings Market: By Region, 2017-2023
Table 3 North America Thermal Barrier Coatings Market: By Country, 2017-2023
Table 4 Europe Thermal Barrier Coatings Market: By Country, 2017-2023
Table 5 Asia-Pacific Thermal Barrier Coatings Market: By Country, 2017-2023
Table 6 Middle East & Africa Thermal Barrier Coatings Market: By Country, 2017-2023
Table 7 Latin America Thermal Barrier Coatings Market: By Country, 2017-2023
Table 8 Global Thermal Barrier Coatings by Product Market: By Regions, 2017-2023
Table 9 North America Thermal Barrier Coatings by Product Market: By Country, 2017-2023
Table 10 Europe Thermal Barrier Coatings by Product Market: By Country, 2017-2023
Table 11 Asia-Pacific Thermal Barrier Coatings by Product Market: By Country, 2017-2023
Table 12 Middle East & Africa Thermal Barrier Coatings by Product Market: By Country, 2017-2023
Table 13 Latin America Thermal Barrier Coatings by Product Market: By Country, 2017-2023
Table 14 Global Thermal Barrier Coatings by Technology Market: By Regions, 2017-2023
Table 15 North America Thermal Barrier Coatings by Technology Market: By Country, 2017-2023
Table 16 Europe Thermal Barrier Coatings by Technology Market: By Country, 2017-2023
Table 17 Asia-Pacific Thermal Barrier Coatings by Technology Market: By Country, 2017-2023
Table 18 Middle East & Africa Thermal Barrier Coatings by Technology Market: By Country, 2017-2023
Table 19 Latin America Thermal Barrier Coatings by Technology Market: By Country, 2017-2023
Table 20 Global Thermal Barrier Coatings by Application Market: By Regions, 2017-2023
Table 21 North America Thermal Barrier Coatings for Application Market: By Country, 2017-2023
Table 22 Europe Thermal Barrier Coatings for Application Market: By Country, 2017-2023
Table 23 Asia-Pacific Thermal Barrier Coatings for Application Market: By Country, 2017-2023
Table 24 Middle East & Africa Thermal Barrier Coatings for Application Market: By Country, 2017-2023
Table 25 Latin America Thermal Barrier Coatings for Application Market: By Country, 2017-2023
Table 26 Global Product Market: By Region, 2017-2023
Table 27 Global Technology Market: By Region, 2017-2023
Table 28 Global Application Market: By Region, 2017-2023
Table 29 North America Thermal Barrier Coatings Market, By Country
Table 30 North America Thermal Barrier Coatings Market, By Product
Table 31 North America Thermal Barrier Coatings Market, By Technology
Table 32 North America Thermal Barrier Coatings Market, By Application
Table 33 Europe: Thermal Barrier Coatings Market, By Country
Table 34 Europe: Thermal Barrier Coatings Market, By Product
Table 35 Europe: Thermal Barrier Coatings Market, By Technology
Table 36 Europe: Thermal Barrier Coatings Market, By Application
Table 37 Asia-Pacific: Thermal Barrier Coatings Market, By Country
Table 38 Asia-Pacific: Thermal Barrier Coatings Market, By Product
Table 39 Asia-Pacific: Thermal Barrier Coatings Market, By Technology
Table 40 Asia-Pacific: Thermal Barrier Coatings Market, By Application
Table 41 Middle East & Africa: Thermal Barrier Coatings Market, By Country
Table 42 Middle East & Africa: Thermal Barrier Coatings Market, By Product
Table 43 Middle East & Africa: Thermal Barrier Coatings Market, By Technology
Table 44 Middle East & Africa: Thermal Barrier Coatings Market, By Application
Table 45 Latin America: Thermal Barrier Coatings Market, By Country
Table 46 Latin America Thermal Barrier Coatings Market, By Product
Table 47 Latin America Thermal Barrier Coatings Market, By Technology
Table 48 Latin America: Thermal Barrier Coatings Market, By Application
List Of Figures:

FIGURE 1 Global Thermal Barrier Coatings market segmentation
FIGURE 2 Forecast Methodology
FIGURE 3 Five Forces Analysis of Global Thermal Barrier Coatings Market
FIGURE 4 Value Chain of Global Thermal Barrier Coatings Market
FIGURE 5 Share of Global Thermal Barrier Coatings Market in 2017, by country (in %)
FIGURE 6 Global Thermal Barrier Coatings Market, 2017-2023,
FIGURE 7 Sub segments of Product
FIGURE 8 Global Thermal Barrier Coatings Market size by Product, 2017
FIGURE 9 Share of Global Thermal Barrier Coatings Market by Product, 2017 to 2023
FIGURE 10 Global Thermal Barrier Coatings Market size by Technology, 2017
FIGURE 11 Share of Global Thermal Barrier Coatings Market by Technology, 2017 to 2023
FIGURE 12 Global Thermal Barrier Coatings Market size by Application, 2017
FIGURE 13 Share of Global Thermal Barrier Coatings Market by Application, 2017 to 2023