

Global X-ray Inspection System Market Size study & Forecast, by Technology (Digital Imaging, Film Based Imaging) by Dimension (2D, 3D) by Vertical (Manufacturing, Oil & gas, Aerospace, Government Infrastructure, Automotive, Power Generation, Food & Pharmaceuticals, Others) and Regional Analysis, 2023-2030

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Abstracts

Global X-ray Inspection System Market is valued approximately USD 0.75 billion in 2022 and is anticipated to grow with a healthy growth rate of more than 6.2% over the forecast period 2023-2030. X-ray Inspection System is a technology used for examining the internal structure of objects or materials using X-rays. These systems typically consist of an X-ray source, which emits X-ray radiation, and a detector, which captures the X-rays after they pass through the object being inspected. The object is placed between the X-ray source and the detector, and any variations in the absorption of X-rays by different materials within the object produce an image that reveals its internal features. The X-ray Inspection System market is expanding because of factors such as rising integration of medical robotics into X-ray inspection system and growing rate of industrialization. As a result, the demand of X-ray Inspection System has progressively increased in the international market during the forecast period 2023-2030.

Medical robotics can provide highly precise and accurate movements, enhancing the overall performance of X-ray inspection systems. This improved accuracy can lead to better detection and analysis of defects or anomalies in the inspected materials, which is particularly crucial in industries where quality control is paramount, such as manufacturing or healthcare. According to the Statista, the global medical robotics market accounts USD 10.9 billion in 2021 and projected to reach up to USD 44.4 billion

by the year 2030. Furthermore, medical X-ray Inspection Systems are a fundamental tool in medical imaging, allowing healthcare professionals to visualize the internal structures of the human body for diagnostic purposes, such as detecting fractures, tumors, or other abnormalities. Another important factor driving the X-ray Inspection System market is the increasing rate of industrialization. These X-ray Inspection Systems are used to inspect products for defects, such as cracks, voids, or foreign objects, ensuring quality control and compliance with industry standards throughout the manufacturing process. In addition, as per Statista, in 2020 the global manufacturing industry accounted for USD 12.17 trillion and is projected to reach up to USD 17.67 trillion by the year 2028. Moreover, growing investments in smart manufacturing technologies and technological advancements associated with digital imaging automated inspection systems are anticipated to create a lucrative growth opportunity for the market over the forecast period. However, the high cost of X-ray Inspection Systems and the presence of alternative inspection technologies are going to impede overall market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global X-ray Inspection System Market study include Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the growing emphasis on adopting cutting-edge imaging technologies in the region. Cutting-edge imaging technologies enable X-ray Inspection Systems to be more versatile in their applications. They can be adapted to inspect a wide range of products across various industries, from food and pharmaceuticals to electronics and automotive components, thereby expanding their market reach and driving growth. The region's dominant performance is anticipated to propel the overall demand for X-ray Inspection Systems. Furthermore, Asia Pacific is expected to grow fastest during the forecast period, owing to factors such as the growing rate of industrialization in the region. X-ray Inspection Systems can help industrial operations run more efficiently and cost-effectively. Companies that identify problems or irregularities prior to the manufacturing process can save costly rework, recalls, and warranty claims.

Major market players included in this report are:

Mettler-Toledo International Inc

Nordson Corporation

Comet Group Holding AG

YXLON International GmbH

Viscom AG

North Star Imaging, Inc

Nikon Metrology NV

General Electric Company

Smith's Detection, Inc

3DX-RAY Ltd

Recent Developments in the Market:

In May 2023, Nikon Corporation has announced that the first model in its new high-performance X-ray CT series, which features improved precision, resolution, and scan speed, is now available for order. The large-volume VOXLS 40 C 450, which can inspect items of varying sizes and densities both internally and externally, is suitable for a wide range of applications, including additively manufactured components. The machinery includes two microfocus X-ray sources made by Nikon and exclusive to the company. One source is rated at 450 kV for penetrating large or dense parts, while the other at 225 kV for analysing smaller or lower density components.

Global X-ray Inspection System Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered - Technology, Dimension, Vertical, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

by Technology

Digital Imaging

Film Based Imaging

by Dimension

2D

3D

by Vertical

Manufacturing

Oil & gas

Aerospace

Government Infrastructure

Automotive

Power Generation

Food & Pharmaceuticals

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Contents

CHAPTER 1. EXECUTIVE SUMMARY

- 1.1. Market Snapshot
- 1.2. Global & Segmental Market Estimates & Forecasts, 2020-2030 (USD Billion)
 - 1.2.1. X-ray Inspection System Market, by Region, 2020-2030 (USD Billion)
 - 1.2.2. X-ray Inspection System Market, by Technology, 2020-2030 (USD Billion)
 - 1.2.3. X-ray Inspection System Market, by Dimension, 2020-2030 (USD Billion)
 - 1.2.4. X-ray Inspection System Market, by Vertical, 2020-2030 (USD Billion)
- 1.3. Key Trends
- 1.4. Estimation Methodology
- 1.5. Research Assumption

CHAPTER 2. GLOBAL X-RAY INSPECTION SYSTEM MARKET DEFINITION AND SCOPE

- 2.1. Objective of the Study
- 2.2. Market Definition & Scope
 - 2.2.1. Industry Evolution
 - 2.2.2. Scope of the Study
- 2.3. Years Considered for the Study
- 2.4. Currency Conversion Rates

CHAPTER 3. GLOBAL X-RAY INSPECTION SYSTEM MARKET DYNAMICS

- 3.1. X-ray Inspection System Market Impact Analysis (2020-2030)
 - 3.1.1. Market Drivers
 - 3.1.1.1. Rising integration of medical robotics into X-ray inspection system
 - 3.1.1.2. Growing rate of industrialisation
 - 3.1.2. Market Challenges
 - 3.1.2.1. High cost of X-ray Inspection System
 - 3.1.2.2. Presence of alternative inspection technologies
 - 3.1.3. Market Opportunities
 - 3.1.3.1. Growing investments in smart manufacturing technologies
 - 3.1.3.2. Technological advancements associated to digital imaging automated inspection systems

CHAPTER 4. GLOBAL X-RAY INSPECTION SYSTEM MARKET INDUSTRY

Global X-ray Inspection System Market Size study & Forecast, by Technology (Digital Imaging, Film Based Imagin...

ANALYSIS

- 4.1. Porter's 5 Force Model
 - 4.1.1. Bargaining Power of Suppliers
 - 4.1.2. Bargaining Power of Buyers
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's 5 Force Impact Analysis
- 4.3. PEST Analysis
 - 4.3.1. Political
 - 4.3.2. Economical
 - 4.3.3. Social
 - 4.3.4. Technological
 - 4.3.5. Environmental
 - 4.3.6. Legal
- 4.4. Top investment opportunity
- 4.5. Top winning strategies
- 4.6. COVID-19 Impact Analysis
- 4.7. Disruptive Trends
- 4.8. Industry Expert Perspective
- 4.9. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL X-RAY INSPECTION SYSTEM MARKET, BY TECHNOLOGY

- 5.1. Market Snapshot
- 5.2. Global X-ray Inspection System Market by Technology, Performance - Potential Analysis
- 5.3. Global X-ray Inspection System Market Estimates & Forecasts by Technology 2020-2030 (USD Billion)
- 5.4. X-ray Inspection System Market, Sub Segment Analysis
 - 5.4.1. Digital Imaging
 - 5.4.2. Film Based Imaging

CHAPTER 6. GLOBAL X-RAY INSPECTION SYSTEM MARKET, BY DIMENSION

- 6.1. Market Snapshot
- 6.2. Global X-ray Inspection System Market by Dimension, Performance - Potential Analysis

6.3. Global X-ray Inspection System Market Estimates & Forecasts by Dimension 2020-2030 (USD Billion)

6.4. X-ray Inspection System Market, Sub Segment Analysis

6.4.1. 2D

6.4.2. 3D

CHAPTER 7. GLOBAL X-RAY INSPECTION SYSTEM MARKET, BY VERTICAL

7.1. Market Snapshot

7.2. Global X-ray Inspection System Market by Vertical, Performance - Potential Analysis

7.3. Global X-ray Inspection System Market Estimates & Forecasts by Vertical 2020-2030 (USD Billion)

7.4. X-ray Inspection System Market, Sub Segment Analysis

7.4.1. Manufacturing

7.4.2. Oil & gas

7.4.3. Aerospace

7.4.4. Government Infrastructure

7.4.5. Automotive

7.4.6. Power Generation

7.4.7. Food & Pharmaceuticals

7.4.8. Others

CHAPTER 8. GLOBAL X-RAY INSPECTION SYSTEM MARKET, REGIONAL ANALYSIS

8.1. Top Leading Countries

8.2. Top Emerging Countries

8.3. X-ray Inspection System Market, Regional Market Snapshot

8.4. North America X-ray Inspection System Market

8.4.1. U.S. X-ray Inspection System Market

8.4.1.1. Technology breakdown estimates & forecasts, 2020-2030

8.4.1.2. Dimension breakdown estimates & forecasts, 2020-2030

8.4.1.3. Vertical breakdown estimates & forecasts, 2020-2030

8.4.2. Canada X-ray Inspection System Market

8.5. Europe X-ray Inspection System Market Snapshot

8.5.1. U.K. X-ray Inspection System Market

8.5.2. Germany X-ray Inspection System Market

8.5.3. France X-ray Inspection System Market

- 8.5.4. Spain X-ray Inspection System Market
- 8.5.5. Italy X-ray Inspection System Market
- 8.5.6. Rest of Europe X-ray Inspection System Market
- 8.6. Asia-Pacific X-ray Inspection System Market Snapshot
 - 8.6.1. China X-ray Inspection System Market
 - 8.6.2. India X-ray Inspection System Market
 - 8.6.3. Japan X-ray Inspection System Market
 - 8.6.4. Australia X-ray Inspection System Market
 - 8.6.5. South Korea X-ray Inspection System Market
 - 8.6.6. Rest of Asia Pacific X-ray Inspection System Market
- 8.7. Latin America X-ray Inspection System Market Snapshot
 - 8.7.1. Brazil X-ray Inspection System Market
 - 8.7.2. Mexico X-ray Inspection System Market
- 8.8. Middle East & Africa X-ray Inspection System Market
 - 8.8.1. Saudi Arabia X-ray Inspection System Market
 - 8.8.2. South Africa X-ray Inspection System Market
 - 8.8.3. Rest of Middle East & Africa X-ray Inspection System Market

CHAPTER 9. COMPETITIVE INTELLIGENCE

- 9.1. Key Company SWOT Analysis
 - 9.1.1. Company
 - 9.1.2. Company
 - 9.1.3. Company
- 9.2. Top Market Strategies
- 9.3. Company Profiles
 - 9.3.1. Mettler-Toledo International Inc
 - 9.3.1.1. Key Information
 - 9.3.1.2. Overview
 - 9.3.1.3. Financial (Subject to Data Availability)
 - 9.3.1.4. Product Summary
 - 9.3.1.5. Recent Developments
 - 9.3.2. Nordson Corporation
 - 9.3.3. Comet Group Holding AG
 - 9.3.4. YXLON International GmbH
 - 9.3.5. Viscom AG
 - 9.3.6. North Star Imaging, Inc
 - 9.3.7. Nikon Metrology NV
 - 9.3.8. General Electric Company

9.3.9. Smiths Detection, Inc

9.3.10. 3DX-RAY Ltd

CHAPTER 10. RESEARCH PROCESS

10.1. Research Process

10.1.1. Data Mining

10.1.2. Analysis

10.1.3. Market Estimation

10.1.4. Validation

10.1.5. Publishing

10.2. Research Attributes

10.3. Research Assumption

12 .LIST OF TABLES

TABLE 1. Global X-ray Inspection System Market, report scope

TABLE 2. Global X-ray Inspection System Market estimates & forecasts by Region
2020-2030 (USD Billion)

TABLE 3. Global X-ray Inspection System Market estimates & forecasts by Technology
2020-2030 (USD Billion)

TABLE 4. Global X-ray Inspection System Market estimates & forecasts by Dimension
2020-2030 (USD Billion)

TABLE 5. Global X-ray Inspection System Market estimates & forecasts by Vertical
2020-2030 (USD Billion)

TABLE 6. Global X-ray Inspection System Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 7. Global X-ray Inspection System Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 8. Global X-ray Inspection System Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 9. Global X-ray Inspection System Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 10. Global X-ray Inspection System Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 11. Global X-ray Inspection System Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 12. Global X-ray Inspection System Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 13. Global X-ray Inspection System Market by region, estimates & forecasts, 2020-2030 (USD Billion)

TABLE 14. Global X-ray Inspection System Market by segment, estimates & forecasts, 2020-2030 (USD Billion)

TABLE 15. Global X-ray Inspection System Market by region, estimates & forecasts, 2020-2030 (USD Billion)

TABLE 16. U.S. X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 17. U.S. X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 18. U.S. X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 19. Canada X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 20. Canada X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 21. Canada X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 22. UK X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 23. UK X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 24. UK X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 25. Germany X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 26. Germany X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 27. Germany X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 28. France X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 29. France X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 30. France X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 31. Italy X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 32. Italy X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 33. Italy X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 34. Spain X-ray Inspection System Market estimates & forecasts, 2020-2030

(USD Billion)

TABLE 35. Spain X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 36. Spain X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 37. RoE X-ray Inspection System Market estimates & forecasts, 2020-2030

(USD Billion)

TABLE 38. RoE X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 39. RoE X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 40. China X-ray Inspection System Market estimates & forecasts, 2020-2030

(USD Billion)

TABLE 41. China X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 42. China X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 43. India X-ray Inspection System Market estimates & forecasts, 2020-2030

(USD Billion)

TABLE 44. India X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 45. India X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 46. Japan X-ray Inspection System Market estimates & forecasts, 2020-2030

(USD Billion)

TABLE 47. Japan X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 48. Japan X-ray Inspection System Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 49. South Korea X-ray Inspection System Market estimates & forecasts,

2020-2030 (USD Billion)

TABLE 50. South Korea X-ray Inspection System Market estimates & forecasts by

segment 2020-2030 (USD Billion)

TABLE 51. South Korea X-ray Inspection System Market estimates & forecasts by

segment 2020-2030 (USD Billion)

TABLE 52. Australia X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 53. Australia X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 54. Australia X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 55. RoAPAC X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 56. RoAPAC X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 57. RoAPAC X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 58. Brazil X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 59. Brazil X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 60. Brazil X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 61. Mexico X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 62. Mexico X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 63. Mexico X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 64. RoLA X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 65. RoLA X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 66. RoLA X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 67. Saudi Arabia X-ray Inspection System Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 68. South Africa X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 69. RoMEA X-ray Inspection System Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 70. List of secondary sources, used in the study of global X-ray Inspection System Market

TABLE 71. List of primary sources, used in the study of global X-ray Inspection System

Market

TABLE 72. Years considered for the study

TABLE 73. Exchange rates considered

List of tables and figures and dummy in nature, final lists may vary in the final deliverable

List Of Figures

LIST OF FIGURES

- FIG 1. Global X-ray Inspection System Market, research methodology
- FIG 2. Global X-ray Inspection System Market, Market estimation techniques
- FIG 3. Global Market size estimates & forecast methods
- FIG 4. Global X-ray Inspection System Market, key trends 2022
- FIG 5. Global X-ray Inspection System Market, growth prospects 2023-2030
- FIG 6. Global X-ray Inspection System Market, porters 5 force model
- FIG 7. Global X-ray Inspection System Market, pest analysis
- FIG 8. Global X-ray Inspection System Market, value chain analysis
- FIG 9. Global X-ray Inspection System Market by segment, 2020 & 2030 (USD Billion)
- FIG 10. Global X-ray Inspection System Market by segment, 2020 & 2030 (USD Billion)
- FIG 11. Global X-ray Inspection System Market by segment, 2020 & 2030 (USD Billion)
- FIG 12. Global X-ray Inspection System Market by segment, 2020 & 2030 (USD Billion)
- FIG 13. Global X-ray Inspection System Market by segment, 2020 & 2030 (USD Billion)
- FIG 14. Global X-ray Inspection System Market, regional snapshot 2020 & 2030
- FIG 15. North America X-ray Inspection System Market 2020 & 2030 (USD Billion)
- FIG 16. Europe X-ray Inspection System Market 2020 & 2030 (USD Billion)
- FIG 17. Asia pacific X-ray Inspection System Market 2020 & 2030 (USD Billion)
- FIG 18. Latin America X-ray Inspection System Market 2020 & 2030 (USD Billion)
- FIG 19. Middle East & Africa X-ray Inspection System Market 2020 & 2030 (USD Billion)

List of tables and figures and dummy in nature, final lists may vary in the final deliverable

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