

# Global Hydrogen Technology Testing, Inspection and Certification (TIC) Market Size study & Forecast, by Process, Service Type, Testing Type, Application and Regional Forecasts 2025-2035

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## Abstracts

The Global Hydrogen Technology Testing, Inspection and Certification (TIC) Market is valued at approximately USD 4.1 billion in 2024 and is anticipated to grow at a remarkable compound annual growth rate (CAGR) of 17.80% during the forecast period from 2025 to 2035. As the global hydrogen economy transitions from an emergent innovation to an industrial reality, the demand for standardized, verified, and high-integrity hydrogen systems has never been more critical. TIC services have evolved to become the backbone of trust, compliance, and safety across the hydrogen value chain—covering generation, storage, and transport. With governments aggressively pushing clean energy goals and companies racing to scale green hydrogen infrastructures, robust TIC frameworks are now essential to bridge regulatory complexity and technological innovation.

Rising investments in green and blue hydrogen production facilities, especially in Europe and Asia, have triggered an urgent need for preemptive risk management, equipment validation, and regulatory alignment. Stakeholders across the ecosystem—from electrolyzer manufacturers to pipeline installers—are increasingly relying on independent TIC providers to meet the rigorous benchmarks of performance, safety, and sustainability. Moreover, as hydrogen is more volatile and diffuse compared to conventional fuels, the industry demands advanced testing protocols for material compatibility, leak prevention, and storage pressure integrity. Certification services, especially for end-use mobility and industrial applications, are poised to see exponential growth as cross-border hydrogen trade and storage scale up globally.

Geographically, Europe is emerging as the frontrunner due to its early regulatory alignment with the EU Green Deal and the Hydrogen Strategy for a climate-neutral Europe. Countries like Germany, France, and the Netherlands are investing heavily in hydrogen infrastructure, supported by public-private partnerships and national safety codes. North America follows closely, driven by a mature industrial base and aggressive decarbonization mandates in the U.S. and Canada. Meanwhile, Asia Pacific is rapidly closing the gap, led by countries such as Japan, China, and South Korea, which are integrating hydrogen into national energy security plans and transportation corridors. The diversity in regional drivers is reinforcing the universal need for TIC services that ensure seamless operations and global interoperability.

Major market player included in this report are:

SGS SA

Bureau Veritas

Intertek Group plc

T?V S?D

DNV GL

DEKRA SE

Applus+

UL Solutions

T?V Rheinland

Element Materials Technology

Kiwa Group

ALS Limited

Eurofins Scientific

Lloyd's Register Group

Mistras Group

## Global Hydrogen Technology Testing, Inspection and Certification (TIC) Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025-2035

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

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

Customization Scope – Free report customization (equivalent up to 8 analysts' 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 for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

By Process:

Generation

Storage

Transportation/Distribution

By Service Type:

Testing

Inspection

Certification

By Testing Type:

Material Testing

Component Testing

System Testing

Others

By Application:

Industrial

Power Generation

Automotive & Transportation

Others

By Region:

North America

U.S.

Canada

## Europe

UK

Germany

France

Spain

Italy

Rest of Europe

## Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

## Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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