



# BUREAU VERITAS INDUSTRY

QUALITY  
ASSURANCE  
PROCESSES OF  
INDUSTRY



**BUREAU  
VERITAS**

Shaping a World of Trust



# BUREAU VERITAS INDUSTRY: ENSURING THE SAFETY AND SUPPORT ACROSS MAJOR INDUSTRIES



## OIL AND GAS

We provide support to oil and gas companies by helping them to operate safely while focusing on costs. At the CAPEX phase, our engineers provide support in designing and building installations that are fully compliant with complex regulations.



## POWER AND UTILITIES

Our Technical Center forms the backbone of in-depth expertise required for Bureau Veritas' Boiler Specialist Services. In South Africa, our engineers recently developed master test and inspection plans on behalf of the country's electricity supplier.



## AEROSPACE

Our Technical Center helps aerospace companies throughout the value chain address three key challenges, namely: quality and regulatory compliance with aircraft manufacturers, optimisation of manufacturing costs, and on-time delivery throughout the supply chain.



## RAIL

Our Technical Center engineers support rail operators, owners and manufacturers in lowering risk, ensuring conformity and achieving business growth. We offer more than 10 years of experience in the rail sector.

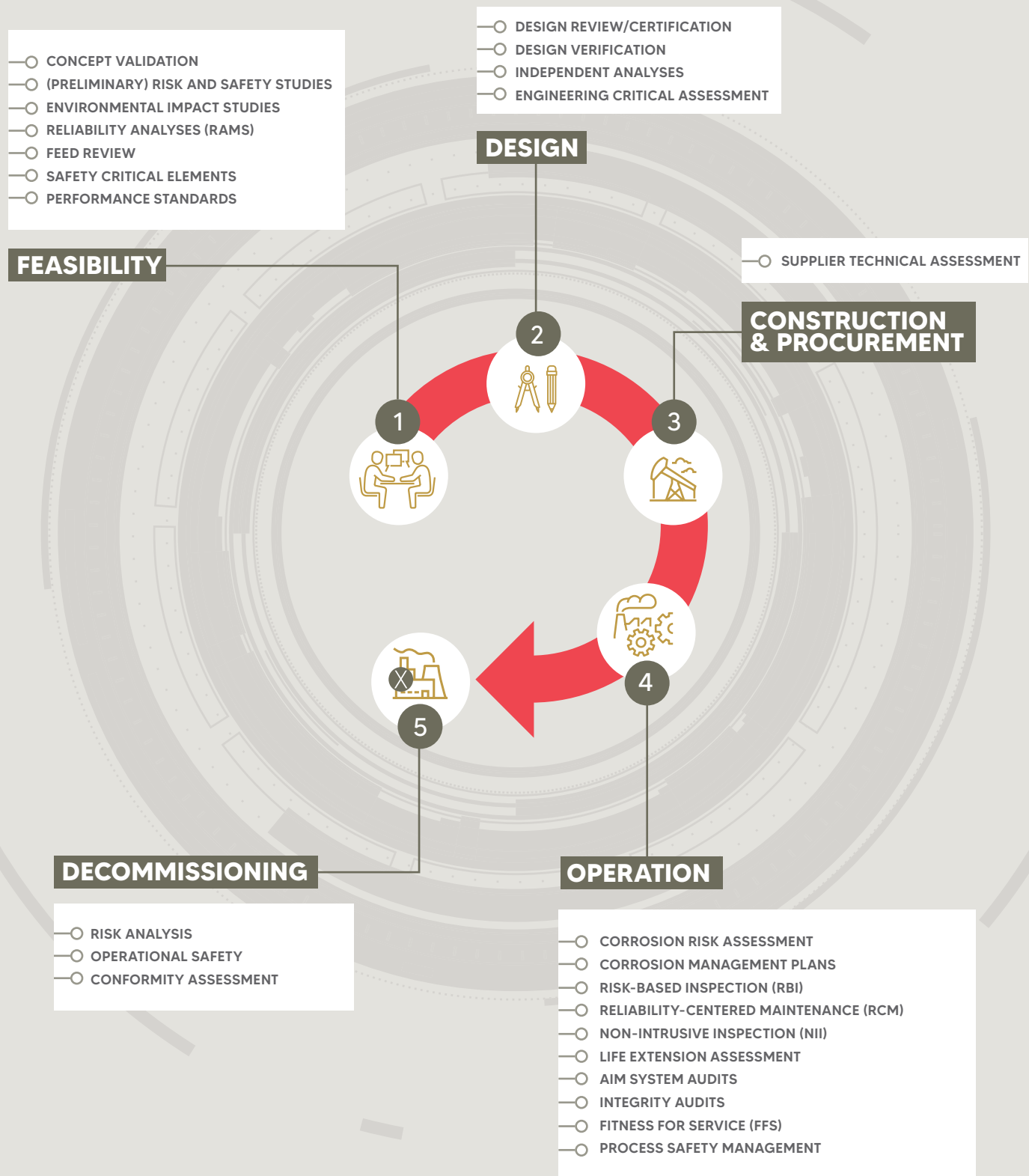


## MINING

Our Technical Center engineers help our mining clients to achieve two main objectives, namely: to maintain production, and to reduce costs and improve efficiency.

# TECHNICAL CENTER SERVICES ACROSS THE ASSET LIFECYCLE

Our Technical Centers provide services at each stage of your asset's design, construction and operation. **Our focus: Ensuring Safe Asset Availability**



# OUR KEY SOLUTIONS

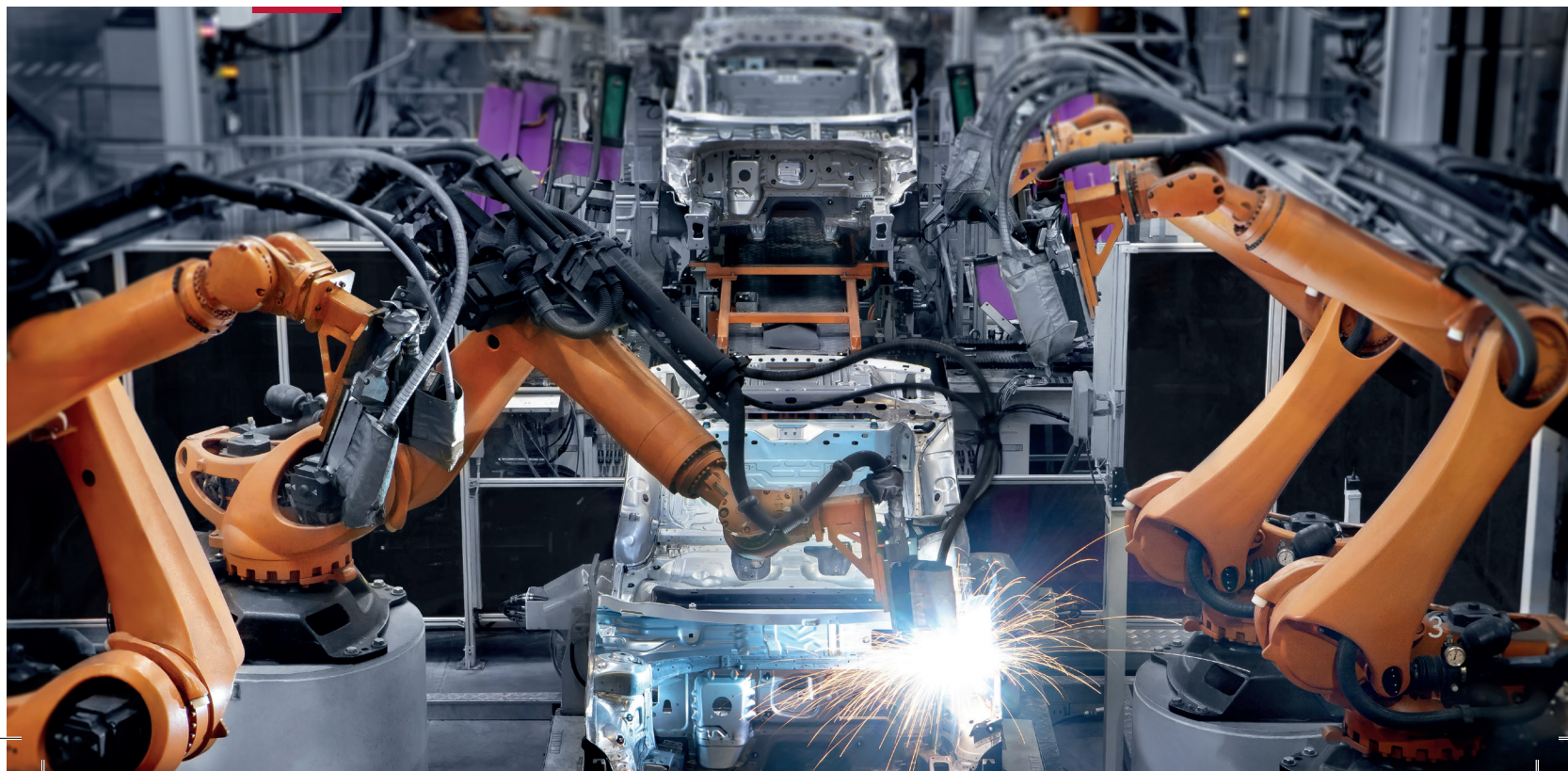
to support the safety and performance of your asset

## 1 Conformity assessment, certification & verification

Conformity services provided by Bureau Veritas Technical Center provide clients with reassurance that a project conforms to specifications and that risks associated with the project are identified and managed. The most important conformity services are design review and verification. Design review is an independent review of the design intent of an engineered system or

process, as defined by documented standards (clients' referentials or regulatory standards). The scope of review will normally include structures, equipment (such as vessels or pipelines), and safety systems. The review process also aims to identify errors or failures in the design or operation of the engineered systems and processes. Bureau Veritas Technical Centers

provide two types of review according to the needs of clients. The first is a 100% appraisal of the design against relevant design standards, with certification to industry or international standards. The second is a verification against Performance Standards defined by the facility operator.





# 2 Risk, Safety and Reliability

Equipment availability is one of the main concerns of our clients, both at CAPEX and OPEX stage.

Our Technical Centers' reliability services teams develop RAM models that will be used as management decision-assisting tools, from design stage and throughout the life of the plants and their successive modifications.

RAM studies identify and rank the critical systems and components

that contribute to production losses, ensure that availability can be achieved at lowest possible cost and with the utmost level of safety.

Our Technical Center Network offers a complete range of Risk and Safety services which focus on identifying, quantifying and managing risks associated with industrial assets and processes.

They range from HAZard IDentification studies to highly sophisticated Quantitative Risk Assessments.

Bureau Veritas also promotes innovative process safety services and a risk-based approach for defining Safety Critical Elements.

The objective is to help operators control their OPEX Verification costs while complying with local regulations.

## TOOL FOCUS OPTIMISE



OPTIMISE software, developed by Bureau Veritas, models maintenance and operations scenarios to support you in your decisions.

Data modeling helps you identify the equipment with the highest risk of failure, anticipate process bottlenecks, and understand the production and cost impact of adding or removing equipment.

It enables you to predict the impact on system reliability and availability of varying duty cycles, service-life limitations, and different environments and conditions.



# Asset Integrity Management (AIM)

Identification of failure modes and risks enables you to allocate inspection and maintenance resources where they are needed, and preserve asset integrity of pressurised equipment and structural elements.

We help you develop and implement Risk-Based Inspection, a process that addresses industrial risks through the design of inspection strategies (what, when, where, how to inspect) that most efficiently match forecasted or observed degradation mechanisms.

We also offer Reliability Centered Maintenance, in which preventive programmes are focused on the most critical elements.

We are increasingly focusing on ways to optimise inspections while avoiding costly production shutdowns. Non-Intrusive Inspection is an innovative methodology used by our engineers to identify external Non-Destructive Testing (NDT) techniques which could be used to inspect a given asset, and the extent of inspection required for reliable condition assessment.

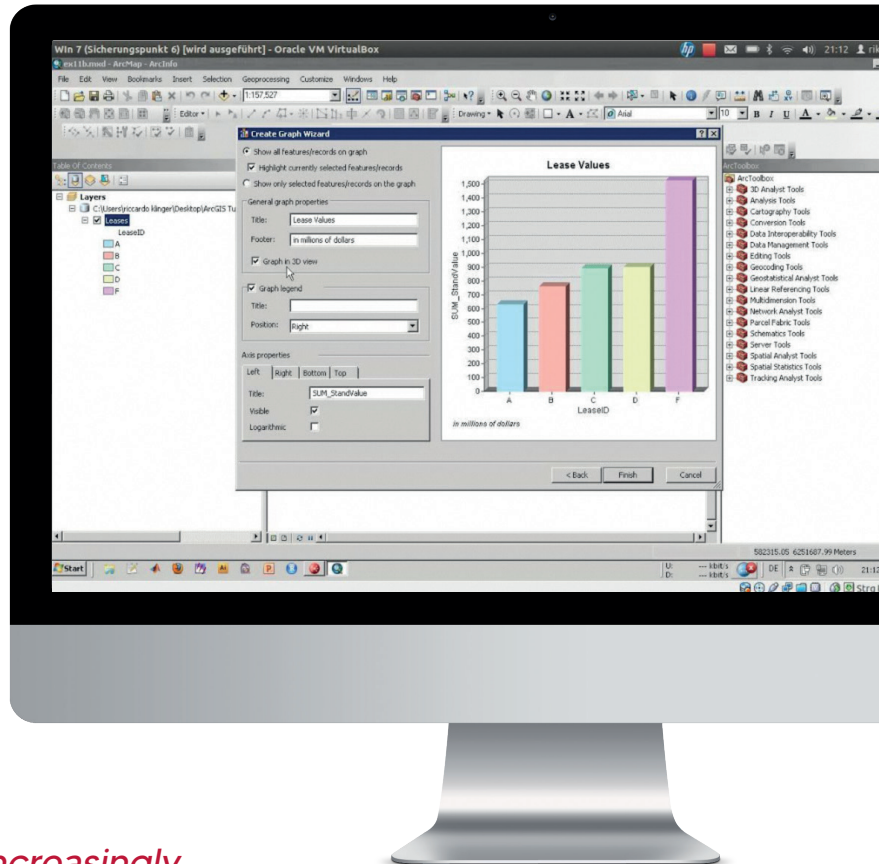
Fitness For Service (FSS) analysis services determine

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the operability of degraded or defective equipment. It involves assessing the acceptability of a defect, and determining whether equipment can remain safely in operation, under what conditions, and for how long.

As a result of the analysis, clients can make an informed decision on repair and maintenance.



## TOOL FOCUS TAME



Bureau Veritas has developed TAME+, a pragmatic Pipeline Integrity Management System (PIMS) to help small network pipeline operators achieve a target of zero leaks. PIMS systems used by transportation companies with long pipelines tend to collect too much data for standard network operators. In addition, data collected is often in the wrong format, making it harder to analyse. TAME+ resolves this problem by offering a structured way of thinking based on threat identification and mitigation. It is backed by a simple software tool that analyses the data, categorises the threats, reveals the pipeline condition and plans future inspections.



# STEP INTO BUREAU VERITAS INSPECTION SERVICES

BUREAU VERITAS HELPS CLIENTS IN ALL INDUSTRIAL SECTORS PRESERVE THE SAFETY, RELIABILITY AND INTEGRITY OF THEIR ASSETS AND CONFORM TO NATIONAL AND INTERNATIONAL STANDARDS. OUR INSPECTION SERVICES COVER SUPPLY CHAIN INTEGRITY AND THE LIFECYCLE OF ASSETS, FROM DESIGN THROUGH TO CONSTRUCTION, OPERATION AND DECOMMISSIONING.

## INSPECTION SERVICES

### AIA INSPECTIONS, PROJECTS QA/QC

- 3rd Party Design Verification & New Manufacture & In-service Inspection;
- Legalisation of Pressure Equipment: local manufacture and imported equipment;
- Documentation review i.e. design verification, QCP's, drawings, categorisation, manufacturing & welding documentation, name plate details into SANS 347;
- Visual and inspection of equipment (internal & external);
- Inspection and surveillance during manufacture;
- Pre-commissioning and re-certification inspections;
- Reporting and certification
- Provision of Site QA/QC personnel in various engineering disciplines: Civil, Structural, Mechanical, Electrical, C&I QA/QC inspectors; and
- Document Controllers

### SHOP INSPECTIONS

- Mechanical and Electrical Second Party;
- Inspection services to client requirements;
- Surveillance during manufacture;
- Visual and dimensional inspections;
- Witnessing of tests e.g. hydrostatic tests, winding tests;
- Review of Documentation e.g. data, books, drawings, material certificates, specifications, welding documentation;
- Release & Final Inspections; and
- Issuing of Reports e.g. inspection, NCR's & release notes

### TLS (TRANSPORT LOGISTICS SERVICES)

- Material Identification;
- Fit-ups, Barrel plates, Ends, Flanges and Neck-Rings;
- X-ray monitoring;
- Hydrostatic testing;
- Witness setting of safety relief valves;
- Tightness test, internal and markings inspection;
- Data book review; and
- Final assessment

### B&I INSPECTIONS

- Fire safety;
- Electrical safety;
- Risk management;
- Pressure equipment & vessels; and
- Occupational hygiene



## A WORLDWIDE NETWORK OF TECHNICAL CENTERS

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BUREAU VERITAS' TECHNICAL CENTERS ENJOY LARGE-SCALE GLOBAL REACH. TO DATE, WE HAVE:



15+ LOCATIONS



10 TECHNICAL CENTERS



500 ENGINEERS

## MEET OUR STAKEHOLDERS

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Our Technical Center Africa is backed by stakeholders who believe in our core mission i.e. to provide expertise, experience and specialised engineering application to clients across the world. Our valued stakeholders include:



Technical Center Africa Team (SA)



Bureau Veritas staff – throughout the African continent.



Bureau Veritas Global



Bureau Veritas – Technical Center Global Team



Customers and prospective customers across industries

## WHAT ARE YOU WAITING FOR?

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Take your business to the next level with Bureau Veritas' Technical Center Africa. Contact us for all your specialised engineering needs.



[contact.africa@bureauveritas.com](mailto:contact.africa@bureauveritas.com)



[www.bureauveritas.africa](http://www.bureauveritas.africa)



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