



## **Risk Based Inspection (RBI) Management Systems**

### **SANAS new accreditation programme launched**

The Minister of the Department of Labour (DoL) has, under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety and the Minister of Finance issued Pressure Equipment Regulations that recognises the use of Risk Based Inspection (RBI) implemented by users of pressure vessels and steam generator in industries. These regulations had tasked South African National Accreditation System (SANAS) with the responsibility to develop an accreditation programme that will recognise certification bodies that will certify risk based inspection management systems.

On 15 August 2013, SANAS and DoL launched the accreditation programme for the risk based inspection management system for the certification bodies that will be certifying the users who have implemented RBI after the approval by the DoL. Stakeholders that are involved in the risk based inspection establishment, implementation, maintenance and consultation services as well as users of pressurised vessels and steam generators attended the launch.

RBI involves the planning of an inspection on the basis of the information obtained from a risk analysis of the pressurised equipment. The purpose of the risk analysis is to identify the potential degradation mechanisms and threats to the integrity of the equipment and to assess the consequences and risks of failure. The test and inspection plan (ITP) can then target the high risk equipment and be designed to detect potential degradation before fitness-for-service could be threatened.

The Pressure Equipment Regulation (PER) states that users may, as an alternative to the in-service inspection implement a risk-based inspection management system in accordance with the relevant health and safety standard as referred to in SANS 347. The regulation further states that the implemented risk-based inspection process shall be verified by certification bodies accredited by the accreditation authority, i.e. SANAS in terms of ISO 17021 and approved by the chief inspector of the DOL.

The reasons why users in industries adopt risk based inspection approaches to the management of their plants safety can be diverse. It is generally agreed that one of the main reasons is to optimise the costs of complying with statutory obligations for health and safety. Mr Jacob Malatse of the DoL, Directorate of Electrical and Mechanical Engineering confirmed that the main aim and benefit of risk based inspection management systems, when properly carried out, must always be to manage and minimise the likelihood and consequences of plant failures at an acceptable level and thereby avoid unreasonable risks of harm to people and the environment.

In addition to the potential harm to people and the environment failures almost always have a direct or indirect effect that is harmful to the business of the user. For example:

- Lost production;
- Costs of follow-up to an incident, replacement of equipment;
- Loss of any public image;
- Higher insurance premiums for the plant;
- Costs of legal action.

Inspection bodies and users in industries have traditionally followed a prescriptive inspection philosophy. This has often been criticised for causing excessive plant downtime leading to unnecessary loss of production and operating revenue. In addition, inspection can have the potential for plants returning to service in a less safe condition. For example, some equipment only suffers degradation as a result of being opened up for a visual examination. For other plants, the most onerous condition is experienced at either start-up or shut-down. In these cases, there are strong arguments for inspection being carried out less often or non-intrusively. Equipment is not only shut down for inspection but also for maintenance purposes.

Accreditation is internationally and nationally recognised as a reliable and transparent method of confirming the technical competence of conformity assessment bodies (CABs) such as certification bodies and inspection bodies. SANAS as sole accreditation body of the Republic of South Africa provides formal recognition of CAB's technical competence to perform certification functions as per their scope of accreditations. SANAS is also recognised internationally by the International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum (IAF).

Accreditation has proven to reduce the risk and enhance public confidence in the results that are produced from the CABs that are accredited. SANAS will be providing third party attestation of the technical competence of the certification bodies that will be certifying users of risk based inspection management systems.

The workshop was used to roll-out the SANAS accreditation programme for the Risk Based Inspection Management System. During the workshop the accreditation process of SANAS was presented and unpacked. The expectations is that the users in industries that have implemented RBI will in future apply for their risk based inspection management system to be certified by SANAS accredited certification bodies and get approval from DoL for they are RBI programme.

**Ends**

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