

The whole life-cycle approach of Brazilian Regulations on Explosive Atmospheres

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Workshop for Regulatory Authorities of Latin American countries and BRICs countries



Ministério do
Desenvolvimento, Indústria
e Comércio Exterior



- **Population: 200 Million**
 - **Surface: 8,5 Million Km2**
 - **GDP: 2,3 Trillion of US\$**
- 7th Economy in the World Bank Ranking**

Source: World Bank

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Inmetro



www.zerrenner.fot.br

About Inmetro

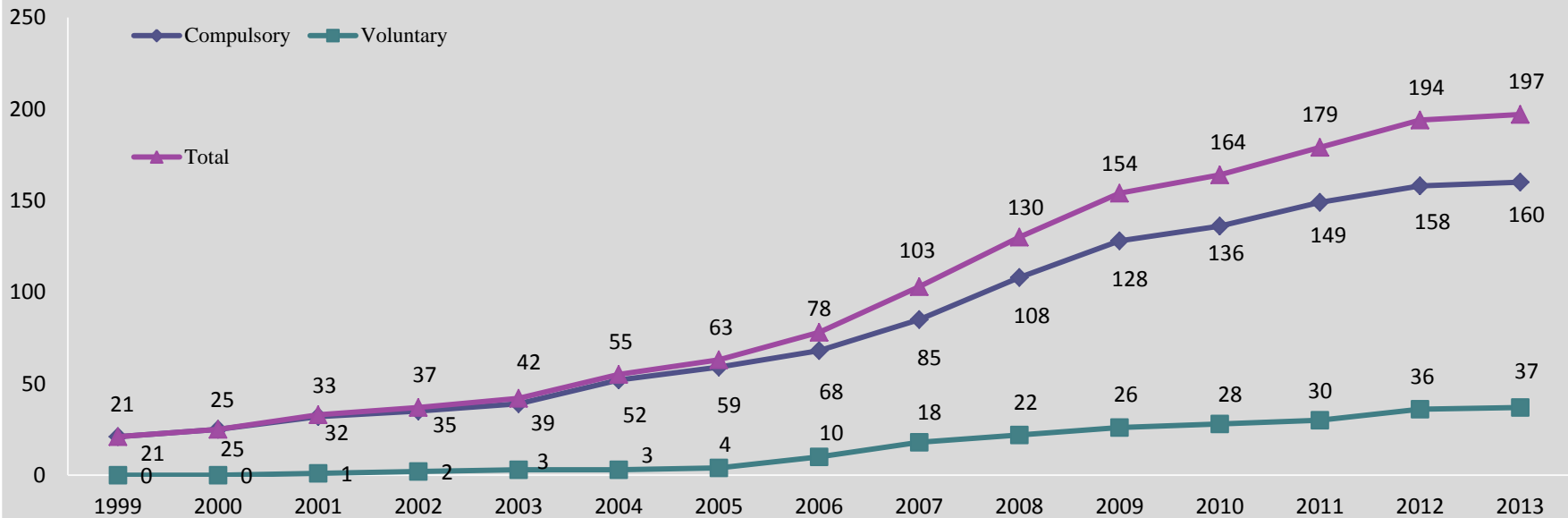
- National Institute of Metrology, Quality and Technology (Inmetro) was created by law in December, 1973, to support Brazilian enterprises to increase their productivity and the quality of goods and services and to protect the consumer.
- It is linked to the Ministry of Development, Industry and Foreign Trade
- 2011 Budget: US\$ 400 million
- Staff: 2 100 professionals, 220 Ph. D.s

Inmetro – Main Activities

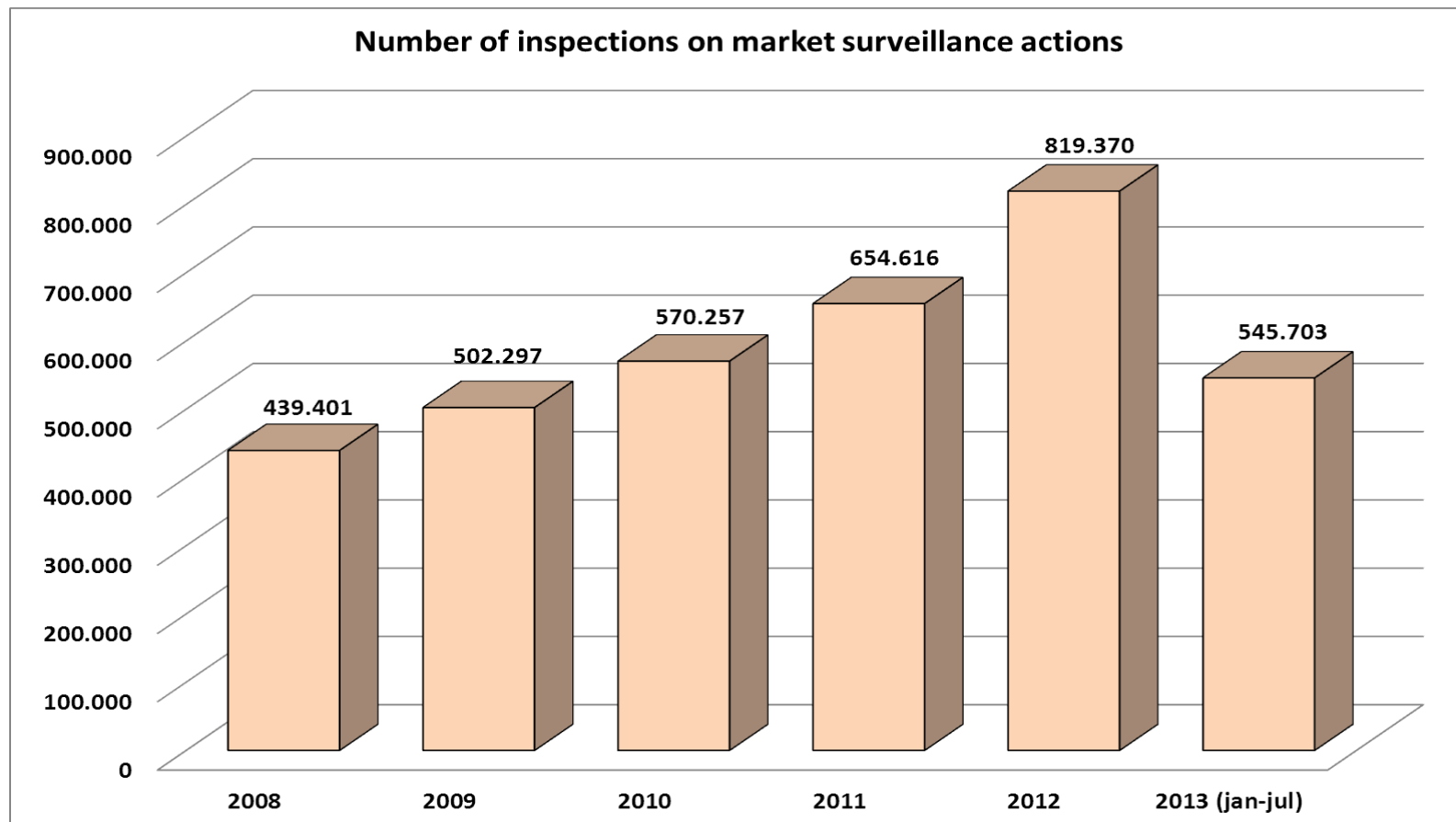
- **Scientific and Industrial Metrology**
- **Legal Metrology**
- **Conformity Assessment**
- **Accreditation of Certification & Inspection Bodies and Testing & Calibration Laboratories**
- **Enquiry Point for the Agreement on Technical Barriers to Trade (WTO)**
- **Innovation & Knowledge Diffusion**
- **Sciences of Life Metrology**

Conformity Assessment Activity Absolute Data

Number of Conformity Assessment Programs



Conformity Assessment Activity Absolute Data



Conformity Assessment Activity Absolute Data

- Accredited Certification Bodies for Products: 80
- Accredited Laboratories: 546 (testing), 312 (calibration)

Programs – IEC Scheme

- **Electrical equipment for explosive atmospheres**
- **Refrigeration compressors**
- **Information Technology Equipment (in study)**

Conformity Assessment Procedure for Explosive Atmosphere

- In 1980, Petrobras, in the Campos Basin Platforms, demanded to Inmetro a Certification Program;
- Initial Regulation: Inmetro Ordinance #164/1991;
- Current Regulation: Inmetro Ordinance # 179/2010;
- Ministry of Employment and Labor is the Regulatory Authority
- Technical commission involving stakeholders to advise Inmetro in the establishment of minimum safety requirements
- Portaria 89, 2012 february – Amendments in the Portaria 179/2010

Conformity Assessment Procedure for Explosive Atmosphere Ordinance

- **Scope: electrical and electronic equipment for explosive atmospheres, in terms of gases and vapors and combustible dusts**
- **Normative basis: ABNT NBR IEC 60079 Series**
- **Objective: Safety for users and facilities**
- **Certification: Models 5 or 7**
- **Acceptance of Test Report (ExTR) of IECEx System**

Conformity Assessment Procedure for Explosive Atmosphere

- **Accredited Certification Bodies for Products: 9**
- **Accredited Laboratories : 2**
- **Valid certificates issued: 4.577**
- **Certified products: 8.056**

New Demands on Conformity

Assessment for Explosive Atmosphere

- **Service Facilities Certification for “Ex”
Equipment repair**
- **Personnel Competence Certification “Ex”**

Recognition Agreements

Accreditation Bodies

- IAF (International Accreditation Forum)
- ILAC (International Laboratory Accreditation Cooperation)
- IAAC (Inter American Accreditation Cooperation)

Conformity Assessment Programs

- PEFC (Program for the Endorsement of Forest Certification Schemes)

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Thanks

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