XVIII IMEKO WORLD CONGRESS
Metrology for a Sustainable Development
September, 17 – 22, 2006, Rio de Janeiro, Brazil

METROLOGICAL EVALUATION OF FLOW MEASUREMENT SYSTEM APPLIED TO MONITORING BEER PRODUCTION

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Abstract: The present paper intend to present the main metrological aspects involved in the flow measurement system (SMV) applied to monitoring beer production.

The installation of the SMV in the manufacture units appeared as a necessity of the Inland Revenue of Brazil (RFB) in inspect the quantity of beer produced, having as intention the attainment of reference elements that could supply comparison information with the taxed quantity. In this context, the intention is the combat to the tax evasion, especially the guarantee of the fair competition, based on the relevance of this segment for the Brazilian economy.

The legal arguments for this activity are supported by: Provisory Law (Medida Provisória) nº 2158-35/2001, Normative Instruction SRF (Instrução Normativa SRF) n° 265/2002 and Executive Declaratory Acts of RFB (Ato Declaratório Executivo) nº 20/2003 and nº 07/2004. The documents above are also shown. In addition, the pertinent requirements are displayed to this work.

Inmetro has its ability recognized for execution of the metrological evaluations due the arrangement celebrated with the RFB. Such execution comes being lead in the scope of the Direction of Legal Metrology (Dimel), through the Division of Instruments of Specific Mass, Temperature and Others (Dimet).

The SMV is formed by:

- Flowmeter - for the estimate of volume produced , in given unit of time;
- Conductivimeter - for measurements of conductivity and temperature;
- Recorder - dedicated to the storage the measured data;
- VPN (Virtual Private Network) and firewall - transference of the registered data in safe way.

In this paper, the metrological evaluation of the flowmeter and conductivimeter is boarded, since that this is the inherent activity in Inmetro. The main involved aspects in the execution of the activities are presented, as well as the applicable requirements.

From of this experience, similar initiatives are already being developed, as example of the extension of the SMV applicability in inspecting the production of soft drinks .

The attribution of the metrology, represented in this case by the Direction of Legal Metrology's performance, is salient as relevant tool to the service of the citizen, the industry and the State, being this the final reflection of the present article, where some social-economic consequences are presented.

Keywords: legal metrology, flow measurement system, conductivity.

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