

NGV – Brazilian Standards and Regulations

Rev.# 5- February, 2007

Standard and Regulation Organizations

ANP – National Petroleum, Natural Gas and Biofuel Agency - www.anp.gov.br

Inmetro - National Metrology, Standards and Industrial Quality Institute-www.inmetro.gov.br

ABNT – Brazilian Technical Standards Association - www.abnt.org.br

Conama – National Environmental Council - www.mma.gov.br/port/conama

Ibama – Brazilian Environmental Institute - www.ibama.gov.br

Denatran – National Transit Department - www.denatran.gov.br

Contran – National Transit Council - www.denatran.gov.br/contran.htm

MME – Ministry of Mining and Energy - www.mme.gov.br

Natural Gas

ANP Act 104/2002	Establish the natural gas specification, from local or imported sources, to be commercialized, by geographic regions
ANP Act 43/1998	Establishes regulations to import natural gas

Natural Gas Transportation

ANP Act 170/1998	Applied to construction and/or expansion of natural gas transportation or transfer facilities, in gaseous or liquid (LNG) phase.
ANP Act 29/2005	Criteria to calculate natural gas pipeline transportation costs

Distribution and Refueling

ANP Act 118/2000	Establish regulations to LNG-liquefied natural gas bulk distribution and commercialization, as also as CNG-compressed natural gas distribution centers operation
ANP Act 116/2000	Regulates refueling station activities
ANP Act 243/2000	Regulates activities of the bulk compressed natural gas-CNG distribution, commercialization and also operation of the CNG distribution centers.
ANP Act 32/2001	Regulates refueling station activities selling exclusively natural gas for vehicular applications.
Inmetro Act 32/1997	Establish the minimum requirements to be met by mass flow meters in automotive dispenser service.
Conama Act 273/2001	Specifies environmental conditions to be met by refueling station construction site and/or when service discontinuity. (See <i>Inmetro Act 189/2004 below</i>)
Conama Act 319/2002	Requires all refueling stations shall comply with Conama Act 273/2001 above, starting January 1st, 2004 and July 1st, 2004 for operations other than refueling, covered by this Act.
ABNT Standard NBR12236/1994	Establish requirements applied to design, construction and operation of NGV refueling stations, operating at a maximum pressure of 25 MPa.
Inmetro Act 189/2004	Requires certification capabilities from construction companies to build NGV refueling station and commissioning.

Cylinder Manufacturing

ABNT Standard NBR 12790/1995	Establish requirements applied to seamless cylinders for high pressure gas storage.
ABNT Standard NBR 13973/1997	Establish requirements applied to design, fabrication and inspection of plastic reinforced cylinders NGV service.
ABNT Standard NBR ISO	Specify minimum requirements to design, fabrication and tests of high

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4705/2001(Draft)	pressure compressed gas cylinders, with 1 to 150 liters capacity.
ABNT Standard NBR ISO 11439/2001	Specify minimum requirements to design, fabrication and tests of NGV light cylinders.
ABNT Std. 10288	Compressed gas direct expansion hydro test method
Inmetro Act 74/2001	Endorse the ISO 11439 application to NGV light cylinder manufacturing.
Inmetro Act 143/2004	Change the color of new NGV cylinders to yellow, which is mandatory starting July 1, 2006. This will be applied to existing cylinders in NGV service, at the requalifying date. See ABNT Std. NBR 12176.

Cylinder Certification

Inmetro Act 198/2000	Requires all seamless cylinders applied to NGV service shall be certified in accordance with the Brazilian Certification System, to be commercialized in the country.
Inmetro Act 90/2001	Requires all cylinder manufacturers, suppliers, distributors and requalifying service providers shall meet the Brazilian Certification System requirements, starting November 30, 2001
Inmetro Portaria 171/2002	Establishes criteria to evaluate mandatory compliance of NGV cylinders to Inmetro Act 74/2001 (ISO 11439), starting January 1st, 2003.
ABNT Standard 12274/1994	Gives the minimum conditions used cylinders must meet, to be back in service, in general, independently of the applied manufacturing standard.

Cylinder Requalification Service Certification

Inmetro Act 199/2000	Establishes all cylinder requalification services provider shall certified as per the Brazilian Certification System, demonstrating they are capable to execute services in accordance with ABNT Std. NBR 12274 (see above).
Inmetro Act 90/2001	See Cylinder Certification above.

Conversion Kit Manufacturing

Inmetro Act 170/2002	Establishes minimum requirements to fabricate and commercialize NGV system components, except cylinders.
Conama Act 291/2001	Establishes environmental requirements to be met by NGV system components. <i>Several compliance dates (see document)</i>
Ibama Std. 15/2002	Give administrative procedures to execute Conama Act 291/2001 above.
ABNT Std. BR11353-1/1999	Establishes minimum safety requirements to be met by NGV components and installation.
Inmetro Act 257/2002	Establishes evaluation procedures to determine compliance of NGV conversion kits with above mentioned Standards and Acts.

NGV System Service Providers (conversion shops)

Inmetro Act 132/2001	Establishes the Quality Regulations required to qualify shops and obtain the necessary Inmetro registration.
Inmetro Act 102/2002 and RTQ-33-Rev.1	Gives the criteria for concession and renovation of shops' registration, detailed in the attached RTQ-33-Rev.1.

Natural Gas Vehicles (NGVs)

Contran Act 25/1998	Covers vehicle modifications and assign functions required by Art. 98 and 106 of the National Transit Code to Inmetro.
Conama Act 18/1986	Establishes the Automotive Vehicles Control Program (Proconve) applied to all road vehicles in Brazil.
Conama Act 07/1993	Defines basic guidelines and emission standards for road vehicles inspection and maintenance program.

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Conama Act 15/1995	Establishes vehicles emission controls and new vehicle categorization starting January 1, 1996, given continuity to Conama Act 18/1986.
Conama Act 299/2001	Establishes procedures to prepare brand new vehicles emission data, applied to import or local manufactured models.
Ibama Std. Instruction 13/2002	Creates a Reference Term to qualify technical agents for activities related to Proconve.
Inmetro Act 122/2002	Establish an identification tag to be used by all natural gas vehicles, upon vehicle safety inspection approval by a certified Inmetro agent.
Inmetro Act 203/2002	Approves the RTQ-37-Rev.1. Establishes that all NGVs must meet the requirements of RTQ-37-Rev.1 starting October 22nd, 2002, except Article 4 and the single paragraph of Art. 3, which will be applied starting October 1, 2003.
Inmetro Act 190/2003	Establishes the mandatory use of the NGV identification tag, which must be applied to the vehicle windshield, or, alternatively delivered to the vehicle owner or conductor, to be always kept with the vehicle license.
Denatran Act 30/2006	Establishes the Vehicle Safety Certificate national control system
ABNT Std. 6601	Determination of HCs, CO, CO2 in light road vehicles emission gas.

Vehicle Inspection

Inmetro Act 71/1996	Gives instructions to inspect vehicle modifications, by OICs – Authorized Inspection Agents, duly qualified by Inmetro for this purpose.
Inmetro Act 122/2002	Requires the application of the NGV tag in the windshield, immediately after the OIC inspection and approval, starting October 1, 2002.
Inmetro Act 104/2006	Establishes all safety inspections, to be accomplished by a certified inspection organism, shall meet requirements of RTQ-37, attached to Inmetro Act 203/2002, upon an NGV system installation

OICs

Denatran/Inmetro Joint Act 01/2002	Criteria to qualify OICs (Inspection Certification Organism) for safety vehicle inspections and to authorize these agents to issue the CSV – Safe Vehicle Certificate, to meet article 106 of the Brazilian Transit Code.
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OCPs

Inmetro Act /1999 <i>(draft)</i>	Establishes standard NIE-DINQP-038, which details additional technical criteria to authorize OCPs (Product Certification Organism) to certify high pressure cylinders made in accordance with ISO 4705D or ISO 9809.
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