



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

OCT 13 2000

Ref. No. 00-0188

Mr. Eric Valentine
Customer Support & Training
Morgan Schaffer System
5110 Courtrai Avenue
Montreal, Quebec
CANADA H3W 1A7

Dear Mr. Valentine:

This is in response to your June 6, 2000 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they relate to the domestic and international transportation of gas analytical instruments, identified as a TFGA-P200 Portable Fault Gas Analyzer and a PHA-1000 Portable Hydrogen Analyzer, by passenger aircraft. You state that a DOT 3E1800 cylinder with a capacity of 300 ml is installed inside the instrument housing. The instrument and a DOT 4B240 cylinder with a capacity of 900 ml are packed in an outer packaging. Your questions are paraphrased and answered in the order posed in your letter.

Questions: May the package containing the instrument and cylinders be offered for transportation by passenger aircraft if the DOT 3E1800 cylinder is filled with helium and the DOT 4B240 cylinder is filled with a mixture of 98.6% air and 0.2% each of hydrogen, methane, ethane, ethylene, acetylene, carbon dioxide and carbon monoxide? Similarly, may the package be offered for transportation by passenger aircraft if the DOT-3E1800 cylinder is filled with nitrogen and the DOT 4B240 cylinder is filled with a mixture of 99% air and 1% hydrogen?

Answer: The answer to both questions is yes. A DOT 3E cylinder is authorized for helium and nitrogen by § 173.302. A DOT 4B cylinder is authorized for a nonflammable compressed gas mixture by § 173.302 (a). When offered for transportation, the valve on the DOT 3E cylinder installed inside the instrument must be tightly closed. See §§ 173.27, 173.34 and 173.301.

The package must be declared as a hazardous material shipment. Helium, nitrogen and the described gas mixtures would be classified as Division 2.2 (nonflammable gas). The § 172.101 Hazardous Materials Table authorizes a maximum net weight, in one package, of a Division 2.2 material of up to 75 kg for transportation by passenger aircraft. Each package must be labeled with a Division 2.2 label and properly marked with the proper shipping name and identification number of the hazardous materials as required by §§ 172.400 and 172.301 respectively. In



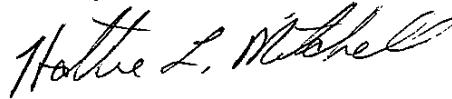
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172.101

addition, each shipment must be accompanied by a shipping paper containing a shipper's certification that the hazardous materials have been properly described, packed, marked, labeled and are in proper condition for transportation. See 49 CFR 172.202 and 172.204.

I hope this information is helpful. I have also enclosed some informational material on the HMR. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Hattie L. Mitchell".

Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards

Enclosures



Butts
172-10A-A analytical
\$173.34
instruments
00-0188

Montreal, June 6, 2000.

Ms. Cheryl West Freeman
U.S. Department of Transportation, RSPA
Office of Hazardous Materials Technology, DMH-20
Room 8430
400 Seventh Street S.W.
Washington, DC 20590-0001

Dear Mrs. Freeman,

As per our telephone conversation, I, on behalf of my company, would like to apply for authorization for the transport of compressed gasses in cylinders in the cargo area of passenger aircraft. We previously had such a letter, from you, provided to us by the original manufacturer of this equipment, MTI Technologies of Fremont CA. Which has since been bought out by Hewlett Packard.

We have two portable instruments:

75kg
-The TFGA-P200 Portable Fault gas Analyzer that contains a 300mL DOT3E1800 cylinder with 1800psi max. of high purity Helium. And is checked-in with a 900mL DOT-4B240 cylinder with 160psi max. of 98.6% air and 0.2% each of hydrogen, methane, ethane, ethylene, acetylene, carbon dioxide and carbon monoxide. This cylinder is for calibration purposes and is equipped with a double valve shutoff.

75kg
-The PHA-1000 Portable Hydrogen Analyzer that contains a 300mL DOT3E1800 cylinder with 1800psi max. of high purity Nitrogen. And is checked-in with a 900mL DOT-4B240 cylinder with 160psi max. of 99% air and 1.0% of hydrogen. This cylinder is for calibration purposes.

We demonstrate and sell this equipment worldwide and we often have questions from airport security. The previous DOT letter usually sufficed but is dated July 1995 and we have been forbidden to board aircraft on occasion because of this.

Our equipment can be seen in great detail at www.MorganSchaffer.com.
And the original Hewlett Packard equipment can be seen at <http://www.chem.agilent.com/cag/products/hppsries.html>

Thank you for your time,

You may contact me at 514 739 1967
Or, by Email at EValentine@MorganSchaffer.com

Eric Valentine B.Sc.
Customer Support & Training
Morgan Schaffer Systems



FAX TRANSMISSION SHEET

TO: Ms. Cheryl Freeman
COMPANY: U.S. Department of Transportation
FAX: (202) 366-3753
DATE: June 2, 2000
FROM: Eric Valentine PAGE 1 OF 1

Dear Mrs. Freeman,

As per our telephone conversation, I, on behalf of my company, would like to apply for authorization for the transport of compressed gasses in cylinders in the cargo area of passenger aircraft. We previously had such a letter, from you, provided to us by the original manufacturer of this equipment, MTI Technologies of Fremont CA. Which has since been bought out by Hewlett Packard.

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Thank you for your time,

You may contact me at 514 739 1967
Or, by Email at EValentine@MorganSchaffer.com

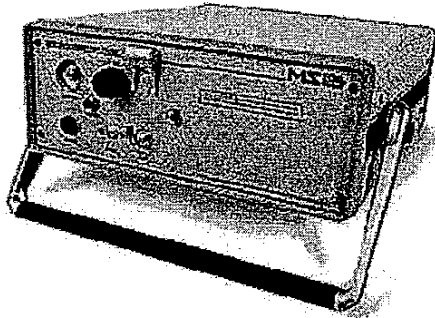
Eric Valentine B.Sc.
Customer Support & Training
Morgan Schaffer Systems

MORGAN™ SCHAFFER

Transformers - The Inside View

Transformer Fault Gas Analyzer Model TFGA-P200

The Future of Gas Analysis



**Unparalleled Speed
and Repeatability**

- Repeatability better than or equal to ASTM D-3612 or IEC 567
- Analyzes oil or gas samples
- Measures the 7 fault gases separately, in less than 100 seconds
- Integrated with data management and fault diagnostic (optional) software
- Worldwide training and support

← **Specifications**

- Home
- Monitoring Equipment
- Diagnostic Tools
- Lab Services
- Sampling Devices
- Technical Documents
- Service & Support
- Job Offers
- File Download
- Analysis



U.S. Department
of Transportation

Research and
Special Programs
Administration

430 South Basin, S.W.
Washington, D.C. 20599

JUL 11 1995

Mr. Muning Zhong
Sales Support Chemist
MFI Analytical Instruments Inc.
41762 Christy Street
Fremont, California 94538

RECEIVED
MAY 11 1995

Dear Mr. Zhong:

This is in response to your application (11477-N) of May 8, 1995 to authorize the transport of helium, by passenger aircraft, in a DOT Specification 3E or 3A cylinder that is part of an analytical instrument. In accordance with 49 CFR 173.109(c), your application is denied as follows:

An exemption is unnecessary because the Hazardous Materials Regulations (49 CFR 172.101) Hazardous Materials Table provide for the transportation of up to 75 kg of helium in an authorized packaging by passenger aircraft. DOT Specification 3E and 3A cylinders are authorized for helium in 49 CFR 173.102. An exemption is not required to transport helium in these cylinders within the instrument described in your application when the cylinder valve is closed during transportation.

If you have any questions concerning this letter, please contact Mrs. Cheryl Fisman at (202) 366-4545.

Sincerely,

Alan I. Roberts
Associate Administrator for
Hazardous Materials Safety