Guidelines For Certification

Part 10 - Industry

Volume 1

GUIDELINES FOR MEDICAL HYPERBARIC CHAMBER FACILITIES

2020

Biro Klasifikasi Indonesia

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Foreword

The “Guidelines for Medical Hyperbaric Chamber Facilities” has been developed for certification of Medical Hyperbaric Chamber. This Guidelines provides requirements for design, construction, inspection & testing, during and after construction are required to be maintained in good order and satisfactory operating conditions. This Guidelines divided into five sections as follows:

Section 1. General

Section 2. Hyperbaric Chamber Construction

Section 3. Hyperbaric Chamber Systems

Section 4. Inspection and Testing During Construction

Section 5. Inspection After Construction

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Table of Contents

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Section 1 General

A. Purpose

The purpose of this guidelines is to ensure that hyperbaric chamber are adequately designed to meet the requirements outlined in ASME PVHO and NFPA Standards. These requirements are used for development of fabrication and in-service inspection plans.

This Guidelines defines the requirements that are applicable to Hyperbaric Chamber for Human Occupancy fabricated to this Guidelines (Section 1 through Section 4) and inspection after construction (Section 5 as applicable).

Hyperbaric chamber shall be designed, fabricated, inspected, tested and marked in accordance with the requirements of this Guidelines or other recognized standard subjected to review and approval by BKI. Deviation from this Guidelines may be approved with special consideration of BKI, i.e. by Formal Safety Assessment (FSA), direct calculation, etc.

B. Application

This Guidelines applies to hyperbaric chambers that enclose a human within their pressure boundary while under internal or external pressure exceeding a differential pressure of 2 psi (15 kPa).

C. User Requirements

It is the responsibility of the user, or an agent acting for the user who intends that a hyperbaric chamber be designed, fabricated, inspected, tested, marked, and certified to be in compliance with this Standard, to provide or cause to be provided for such hyperbaric chamber, a User's Design Specification. The User's Design Specification shall set forth the intended operating conditions of the hyperbaric chamber to provide the basis for design. It shall identify the external environment to which the hyperbaric chamber will be exposed, the intended function of the hyperbaric chamber, mechanical loads imposed on the hyperbaric chamber, specific installation requirements, and applicable codes and standards.

D. Documentation

The manufacturer of hyperbaric chamber shall provide the Manufacturer's Data Report. The manufacturer shall retain a copy of the Manufacturer's Data Report. In addition to the aforementioned documentation, the manufacturer shall furnish the following documentation to the user or the designated agent:

a. Instructions critical to the maintenance
b. Instructions critical to the operation and subsystems (operating procedures)
c. Coating/painting information
d. Photocopy or equivalent of the data plate

e. List of standards used
f. Seal and gasket sizes and materials
g. User's Design Specification
h. Evidence of successful completion of test(s) required
i. System schematics (life support, hydraulics, electrical, communications, etc.)
j. System descriptions (life support, hydraulics, electrical, communications, etc.)
k. Assembly drawings
l. Equipment documentation (technical manuals, catalog cuts, etc.)

E. References

- ASME PVHO – 1 Safety Standard for Pressure Vessel for Human Occupancy
- ASME PVHO – 2 Safety Standard for Pressure Vessel for Human Occupancy In Service Guidelines
- ASME Section II Materials
- ASME Section V Nondestructive Examination
- ASME Section VIII Rules for Construction of Pressure Vessels
- ASME Section IX Welding and Brazing Qualifications
- ASME B31.1 Power Piping
- ASME B31.3 Process Piping
- ASME B31.9 Building Service Piping
- NFPA 70 National Electrical Code
- NFPA 99 Health Care Facilities Code
- NFPA Fire Protection Standards

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