



Hengyi Industries Sdn Bhd
恒逸实业（文莱）有限公司

HYBN-T3-07-0002-2024-2

Equipment Defect and Fault Management System

设备缺陷及故障管理制度

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Version Information 版本信息

1 Rev 1 released on December 31, 2018.

第一版发布时间为 2018 年 12 月 31 日。

2 Rev 2 released on April 1, 2024.

第二版发布时间为 2024 年 4 月 1 日。



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|  HENGYI | Hengyi Industries Sdn Bhd 恒逸实业（文莱）有限公司 | | | |
| | Equipment Defect and Fault Management System 设备缺陷及故障管理制度 | | | |
| | Doc No. | HYBN-T3-07-0002-2024-2 | Ver No. | 2 |

1 Purpose

目的

This System is hereby formulated to standardize equipment defect and fault management of managerial personnel and operating personnel and to ensure safe operation of equipment.

为规范管理人员和操作人员对设备缺陷及故障的管理，确保设备安全运行，特制订本制度。

2 Scope of Application

适用范围

This System applies to all involved departments.

本制度适用于各部门。

3 Terms and Definitions

术语和定义

3.1 Equipment Defect means such equipment degradation, damage to components and parts, failure to meet process control criteria and other phenomena as are caused by various reasons and can be classified into Common Defect and Major Defect according to its nature.

设备缺陷：指由于各种原因造成的设备性能下降、零部件损伤、达不到工艺控制指标等现象，设备缺陷按其性质可分为一般缺陷和重大缺陷。

3.2 Common Defect means such defects as can be eliminated timely and with which the equipment can still operate without the need for special monitoring measures.

一般缺陷：指能够及时消除、虽带病运行但不需采取特殊监护措施的设备缺陷。

3.3 Major Defect means such defects as are likely to cause equipment accident but with which the equipment must operate under special monitoring measures due to production needs.

重大缺陷：指可能引发设备事故，但因生产需要必须采取特殊监护措施而带病运行的设备缺陷。

3.4 Fault means the loss of partial or all functions of equipment that are defined in technical documents due to certain reason.

故障：指设备因某种原因丧失技术文件中明确的部分或全部功能。

4 Management Responsibilities

管理职责

4.1 Specified administrative authority

归口管理部门

4.1.1 Equipment Management Dept. is the specified administrative authority of equipment defect and fault, which shall be responsible for formulating the Equipment Defect and Fault Management System and inspecting and supervising each department's equipment defect and fault management.

机械动力部是设备缺陷及故障的归口管理部门，负责制定设备缺陷及故障管理制度，检查、监督各部门设备缺陷及故障管理工作。

4.1.2 Be responsible for identifying major equipment defect and establishing records; and be responsible for organizing the formulation of major defect monitoring measures, handling plans and rectification plans, and conducting whole-process tracking.

负责鉴定重大设备缺陷并建立台帐；组织制订重大缺陷监控措施、处理预案、整改方案，并全过程跟踪。

4.2 Coordinated management departments

协同管理部门

4.2.1 Planning & Dispatching Dept. participates in formulation of major defect monitoring measures and handling plans and is responsible for ascertaining the responsible department of any public utility tunnel defect and fault.

计划调度部参与制订重大缺陷监控措施、处理预案；负责落实公共管廊缺陷及故障的责任部门。

4.2.2 HSE Dept. participates in formulation of major defect monitoring measures and handling plans.

HSE 管理部参与制订重大缺陷监控措施、处理预案。

4.2.3 Electrical Operation Dept., Instrument Control Dept. and Equipment Maintenance Dept. (hereinafter referred to as the Maintenance Dept.) are responsible for handling any equipment defects on site and provide equipment defect handling records.

电气运行部、仪表控制部、设备检修部（以下简称维保部门）负责现场设备缺陷的处理；提供设备缺陷相关处理记录。

4.3 Executive departments

执行部门

4.3.1 The operation departments are the executive departments, which shall be responsible for daily management of equipment defect and faults in their respective departments and for filing and giving information feedback about equipment defect handling records.

运行部为执行部门，负责本部门设备缺陷及故障的日常管理；做好有关设备缺陷处理记录归档及

信息反馈。

4.3.3 Be responsible for rectification of common defects and establishing common defect management records; and be responsible for preparing and submitting the application form for approval of major defect and cooperating in rectification of any major defect.

负责一般缺陷的整改，建立一般缺陷管理台帐；编制、上报重大缺陷立项申请表，配合做好重大缺陷整改。

5 Management Content

管理内容

5.1 Management principles

管理原则

5.1.1 Closed-loop management: Equipment defect and fault are subject to the whole-process closed-loop management of inspection and discovery, rectification and treatment, recording and filing.

闭环管理：设备缺陷及故障实行检查发现、整改处理、记录归档全过程闭环管理。

5.1.2 Classification management: Common defects are in the charge of the department where equipment is located; Equipment Management Dept. is responsible for organizing to handle major defects and the operation departments are responsible for site management.

分级管理：一般缺陷由设备所在部门负责管理；重大缺陷由机械动力部组织处理，运行部负责现场管理。

5.1.3 Electronic management: All equipment defects and faults are managed online by EM management system; the *Application Form for Approval of Major Equipment Defects*, and the *Major Defect Management Records of Equipment* are completed, submitted and managed in electronic form in this system.

电子化管理：所有设备缺陷及故障通过 EM 管理系统实行在线管理，《设备重大缺陷立项申请表》、《设备重大缺陷管理台帐》以电子文档的方式在系统中进行填报和管理。

5.2 Inspection and handling

检查与处理

5.2.1 Where any equipment defect is found by the operation department, it shall be entered into the EM management system upon being reviewed by the team leader on duty, and its nature shall be determined preliminarily after necessary emergency measures have been taken. Any common defect that can be handled immediately shall be directly notified by operating personnel to the Maintenance Dept., which then will arrive at the site timely to eliminate such defect; any common defect that cannot be handled immediately shall be reported by operating personnel to the person in charge of equipment of the operation department, and the technician

in charge of the equipment will establish the common defect management records and include the same into the maintenance plan, and eliminate the defects during unit maintenance; any equipment defect discovered by operating personnel in the public utility tunnel under the jurisdiction of any other department shall be timely notified to the Planning & Dispatching Dept. for handling.

运行部发现设备缺陷时，由当班班长审核后录入 EM 管理系统，并采取必要的应急措施后，初步判断其性质。对于一般缺陷，能立即处理的，操作人员直接通知维保部门及时到现场进行消缺处理；不能立即处理的，操作人员汇报运行部设备主管人员，由设备主管技术员建立一般缺陷管理台帐，列入检修计划，待装置检修时进行消缺；如操作人员发现设备缺陷存在于其它部门所辖的公共管廊上，应及时通知计划调度部落实处理。

5.2.2 Any major equipment defect shall be reported by operating personnel in time, confirmed on site by the person in charge of equipment and then reported to the leader of operation department and the Equipment Management Dept. for review. Equipment Management Dept. organizes the risk evaluation for major equipment defects, makes the defect elimination plan, and supervises and urges the Maintenance Dept. to timely eliminate the defects and, in the case of failure to eliminate such defects, organizes the formulation of equipment operation monitoring measures and the preparation of maintenance plan and eliminates defects during equipment maintenance, provided that safety is ensured.

对于重大设备缺陷，操作人员应及时上报，经设备主管人员现场确认并报运行部领导及机械动力部进行审核。机械动力部组织重大设备缺陷进行风险评估、制订消缺方案、督促维保部门及时消缺，如不能消缺，应在确保安全的前提下，组织制订设备运行监控措施，组织编制检修计划，待装置检修时进行消缺。

5.2.3 For any major equipment defect, the operation department shall submit the *Application Form for Approval of Major Equipment Defects* to the Company's leader in charge for review and approval; upon approval, the Equipment Management Dept. shall establish the major defects management records.

对于重大设备缺陷，由运行上报重大设备缺陷立项申请表，经公司主管领导审批后由机械动力部建立重大缺陷管理台帐。

5.2.4 Where an equipment defect involves different departments, the Equipment Management Dept. will uniformly organize the formulation of treatment plans and coordinate the implementation of such plans.

设备缺陷如涉及到不同部门，由机械动力部统一组织制订治理方案、协调实施。

5.2.5 If any defective equipment needs to be re-started after shutdown, it shall be fully checked for compliance with the operation requirements; if it fails to reach the operation conditions, the defect must be handled before the equipment is put into operation.

缺陷设备因停运后需再次启运时，应全面检查设备能否满足运行要求；如不具备启运条件，必须对缺陷进行处理后才能投入运行。

5.2.6 The operation department shall complete the closed-loop work within 3 days after the Maintenance Dept. has coped with equipment defect or fault; any maintenance records that

need be entered into the EM system shall be entered by the operation department and the Maintenance Dept. within one week upon defect elimination.

维保部门处理完设备缺陷或故障后，运行部应在消缺后 3 天内完成缺陷闭环工作；对需录入 EM 系统的检修记录，运行部与维保部门应在消缺后一周内录入。

5.2.7 Report to the Equipment Management Dept. within 5 days upon the occurrence of any fault in any important equipment.

重要设备发生故障后，运行部应在 5 天内填写《设备故障分析报告》报机械动力部。

6 Supervision and Inspection

监督检查

Equipment Management Dept. is responsible for supervising the equipment defect and fault management and incorporating the same into performance management for regular inspection and examination.

机械动力部负责设备缺陷及故障管理进行监督并纳入绩效管理，定期进行检查和考核。

7 Associated Procedures and Records

关联程序和记录

7.1 Associated procedures

关联程序

7.1.1 Equipment Defect and Fault Handling Procedures (HYBN-T2-07-0002-2018-2)

设备缺陷及故障处理程序 HYBN-T2-07-0002-2024-2

7.1.2 Equipment Defect and Fault Analysis Procedures (HYBN-T2-07-0003-2018-2)

设备缺陷及故障分析程序 HYBN-T2-07-0003-2024-2

7.2 Associated records

关联记录

7.2.1 Common Defect Management Records of Equipment (HYBN-T6-07-0007-001-2018)

设备一般缺陷管理台帐 HYBN-T6-07-0007-001-2018

7.2.2 Major Defect Management Records of Equipment (HYBN-T6-07-0008-001-2018)

设备重大缺陷管理台帐 HYBN-T6-07-0008-001-2018

7.2.3 Application Form for Approval of Major Equipment Defects (HYBN-T6-07-0009-001-2018)

设备重大缺陷立项申请表 HYBN-T6-07-0009-001-2018

7.2.4 Equipment Fault Analysis Report (HYBN-T6-07-0010-001-2018)

设备故障分析报告 HYBN-T6-07-0010-001-2018

8 Supplementary Rules

附则

8.1 This System is under the jurisdiction of Equipment Management Dept.

本制度由机械动力部归口管理。

8.2 This System is drafted by Equipment Management Dept.

本制度起草部门：机械动力部。

8.3 Equipment Management Dept. is responsible for the interpretation of this System.

本制度解释权归机械动力部拥有。

8.4 Preparation and approval of this System are shown in Table 1:

本制度编制和审批情况见表 1:

Table 1 Revision, preparation and approval of document

表 1 文件版本编制和审批情况

| | | | | | |
|----------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| 2 | 2024-04-01 | Deng Xianling 邓咸林 | Zhao Tingyun 赵挺云 | Xu Ye 徐野 | Chen Liancai 陈连财 |
| Revision 版本 | Issued date 颁布日期 | Prepared by 编制人 | Reviewed by 审核人 | Authorized by 审定人 | Approved by 批准人 |