



# PRE-COMMISSIONING CHECKLIST

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**Project Name:** HENGYI (BRUNEI) PMB PETROCHEMICAL PROJECT  
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## Revision History

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1	15/06/2019	This is the First Edition

 <b>HENGYI</b>	<b>Hengyi Industries Sdn Bhd 恒逸实业（文莱）有限公司</b>					
	<b>Pre-commissioning Checklist</b> 预试车检查表					
	Record No. 记录编号	HYBN-T6-10-5043-003-2019			Page 1 of 6	
Category 类别	Content 检查内容	Completed 执行情况		Conditions & Existing Issues 审查情况及存在问题	Review By 审查人	Confirmed By 确认人
		Yes 是	No 否			
<b>1</b> <b>Process</b> <b>Piping</b> <b>Inspection</b> 工艺配管检查	1.1 Inspect whether the welding of process pipeline has been completed and whether there exists any holes. 检查工艺管道的焊接是否已全部完成，有无漏洞。					
	1.2 Inspect whether the construction team has finished cleaning and purging the pipeline according to the requirements. 检查施工单位是否按照要求已经完成管道的清洗、吹扫。					
	1.3 Inspect whether the pipelines that require acid pickling are acid pickled according to requirements. 检查需要酸洗的管道是否按照要求进行酸洗工作。					
	1.4 Inspect whether the pressure test of process piping and power piping is completed, and there are detailed pressure test records. 工艺、动力管道的耐压试验完成，并有详细的耐压试验记录。					
	1.5 Inspect whether the equipment connected to the pipeline has been installed and fixed.					

	与管道连接的设备已安装固定完毕。					
	1.6 Inspect whether there is a complete non-destructive test report for welds. 是否有完整的焊缝无损检测报告。					
	1.7 Integrity inspection for process pipeline (See HYBN-T6-06-5050-001-2018_Process Unit Comprehensive Checklist) 工艺管道完整性检查（见 HYBN-T6-06-5050-001-2018_Process Unit Comprehensive Checklist）。					
	1.8 Inspection of other items (See HYBN-T6-06-5050-001-2018_Process Unit Comprehensive Checklist) 其他项目检查（见附表 HYBN-T6-06-5050-001-2018_Process Unit Comprehensive Checklist）。					
<b>2 Equipment Inspection 设备检查</b>	2.1 Inspect whether the appearance of the equipment is in good condition. 检查设备的外观是否完好，有无损坏。					
	2.2 Inspect whether the installation of the equipment meets the requirements of the specifications and standards. 设备的安装是否符合规范及标准要求。					
	2.3 Inspect whether the electrostatic grounding of the equipment is in good condition. 检查设备的静电接地是否良好。					
	2.4 Inspect whether the equipment safety accessories (safety valves, rupture disk, explosion-proof door) are complete and in good condition. 检查设备本体安全附件（安全阀、爆破片、防爆门）是否齐全完好。					
	2.5 Inspect whether the pressure vessel has undergone pressure test and has a complete test record.					

	压力容器是否已做过耐压试验并有完整的试验记录。					
	2.6 The equipment manufacturing data book is complete. 设备的随机资料是否齐全。					
	2.7 Inspect whether the construction of equipment foundation has been completed and accepted. 各设备的基础是否已经施工完成并验收合格。					
	2.8 Inspect whether the temporary heavy lifting equipment and lifting equipment used in the construction site have been removed. 用于施工的现场临时起重设备、吊装设备是否已拆除。					
	2.9 Inspect whether the pre-commissioning of rotary equipment with qualified conditions has been completed and there is a complete pre-commissioning report. 具备条件的动设备的单机试车是否已经完成并有完整的试车报告。					
	2.10 Inspect whether the reserved opening of the equipment has been closed with blind flange. 设备预留口是否已用盲法兰封闭。					
	2.11 Inspect whether the mechanical, electrical and instrument maintenance personnel are in place. 机电仪维修人员是否到位。					
	3.1 Inspect whether the installation of the unit's electrical system, instrumentation system, computing system, poison protection system, fire protection system, and explosion prevention systems are completed and accepted. 装置电气、仪表、计算机、防毒防火防爆等系统是否安装完成验收合格。					
	3.2 Inspect whether the instrument and electrical problems					

<b>3 Instrument and electrical Inspection</b> 仪表、电气检查	exposed during pre-commissioning of the equipment have been rectified and accepted. 单机试车过程中暴露出的仪表、电气问题是否已整改完毕验收合格。					
	3.3 Inspect whether the lightning protection grounding of equipment, handrails and buildings has been completed and accepted. 设备、扶梯、建筑物的防雷接地是否已施工完成并验收合格。					
	3.4 Inspect whether the safety interlock and emergency shutdown systems have been installed and debugged. 安全联锁、紧急停车系统是否已安装完成并调试合格。					
	3.5 Inspect whether the UPS has been installed and debugged. UPS 是否已安装完成调试合格。					
	3.6 Inspect whether the temporary lighting facilities for construction have been completely removed. 施工临时照明设施是否已完全拆除。					
	3.7 Inspect whether the on-site control panel has been installed, and the lights are displayed correctly. 现场操作柱是否安装完成，灯光显示正确。					
	3.8 Inspect whether the toxic and harmful gas detection in the plant area has been installed in place and debugged. 装置区的有毒有害气体检测是否已安装到位并调试合格。					
<b>4 Other items inspection</b> 其他项目检	4.1 Inspect whether the civil work on site has been completed. 现场土建施工是否已完成。					
	4.2 Inspect whether the construction machinery,					

查	equipment and vehicles have been removed or evacuated. 施工用机械设备、车辆是否已拆除或撤离。					
	4.3 Inspect whether the temporary facilities for construction in the unit area have been removed, and with completion of works such as materials cleaning, site clearing and vertical construction. 装置区施工临时设施已拆除，工完、料净、场地清，竖向工程施工完。					
	4.4 Inspect whether the cover plates for trench laying and valve well cover plates are complete and in good condition. 地沟敷设的盖板、阀门井盖板等是否齐全完好。					
	4.5 Inspect whether the hardening of the unit area's boundary limits have been completed. 装置边界区硬化是否已完成。					
	4.6 Inspect whether the 66kV united substation (I) – CS11, field auxiliary room 1 (FAR1) and public toilet have met the conditions for use. 区域变电所、机柜间、公共卫生间等是否已具备投用条件。					
	4.7 Inspect whether all the roads in the plant area have been unblocked and have met the conditions to open to traffic. 厂区道路是否已全部畅通，具备通车条件。					
	4.8 Inspect whether the grating plates of platforms, stairs, operating stations, etc. of each unit have been completed and accepted. 各装置平台、楼梯、操作台等的格栅板是否已施工完成并验收合格。					
	4.9 Inspect whether the protective fence of the equipment					

	and platform has been completed and accepted. 设备、平台的防护栏是否已施工完成并验收合格。					
	4.10 Inspect whether the warning signs of the dangerous area have been completed. 危险区域的警戒标识是否已施工完成。					
	4.11 Inspect whether the firefighting facilities have been completed and accepted. 消防设施是否已施工完成并验收合格。					
	4.12 Inspect whether the HSE related materials have completed the handover. HSE 相关资料是否已经交接完成。					
	4.13 Inspect whether the lightning protection and flood control measures in the plant area have been completed and accepted. 厂区的防雷、防洪措施是否已施工完成并验收合格。					
	4.14 Inspect whether there is any existence of potential safety hazards during construction closeout. 是否有存在安全隐患的施工尾项。					

Note: The pre-commissioning checklist is used as the confirmation of various conditions before the handover of the unit. All functional departments need to confirm each handover conditions according to this checklist to ensure smooth handover of the unit.

注：预试车检查表作为装置中交前的各项条件确认，各职能部门需要根据此表对中交条件进行一一确认，确保装置中交顺利进行。