

HYDROTU & TÜV-SÜD QUALITY CONTROL IN PRODUCTION

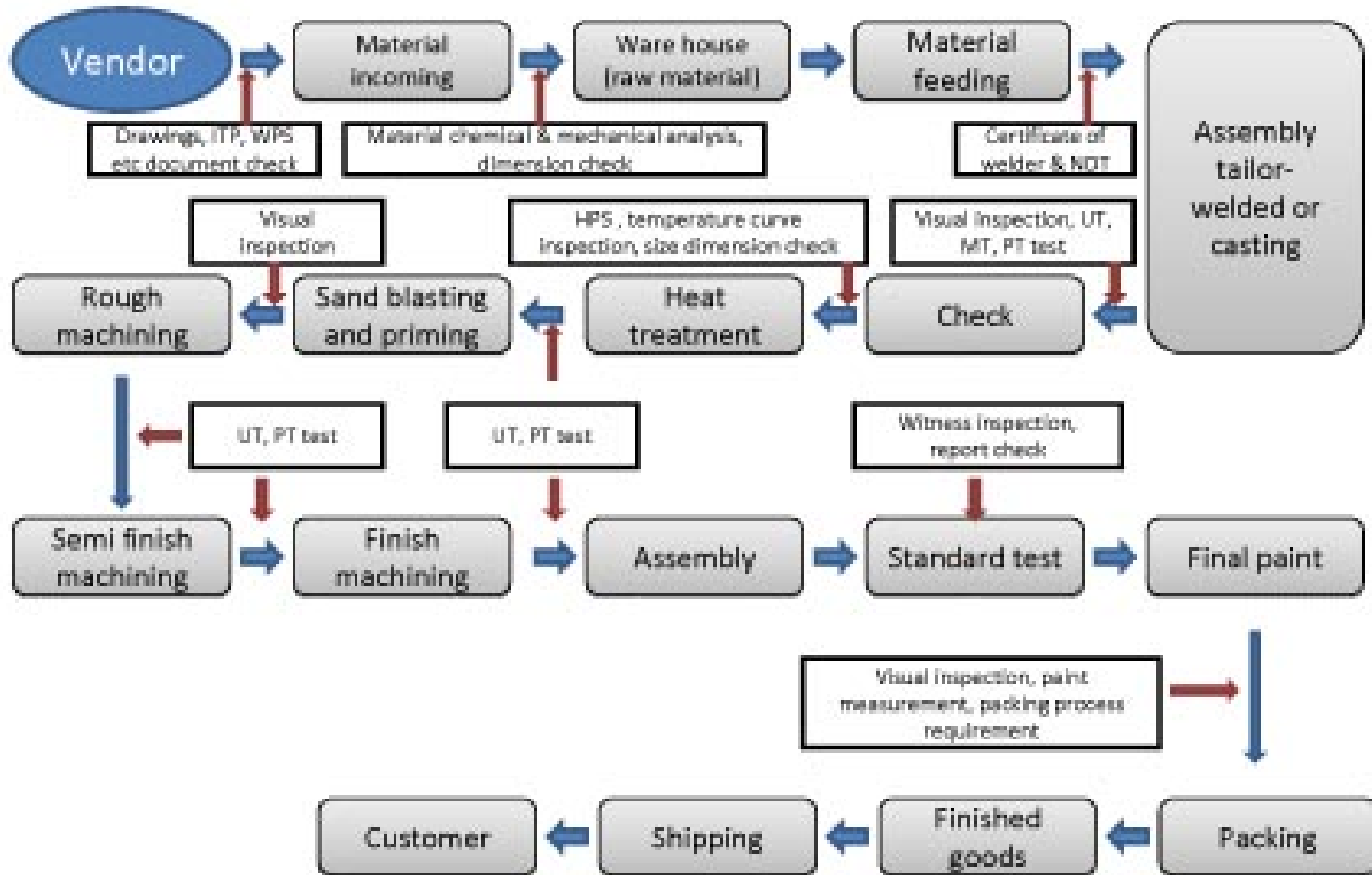
HYDROTU



Industry Service

YAKINCA 3x4380KW
Hangzhou HYDROTU Engineering

Standard production flow management



Drawings, ITP, WPS etc document check



Industry Service

INSPECTION REPORT

2.1.1 Technical drawings list

Valve Bellows Valves (Changsha) Co., Ltd

Welding Procedure Qualification

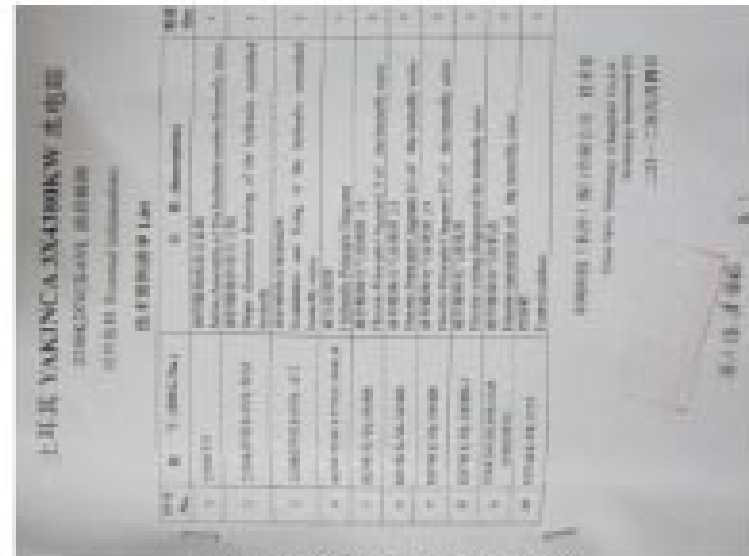
Welding Process : MAG

Base metal: IC+18X19TI-0345C

Specification: 5 10

Thickness Range: For all

Formulator	Checked	Approved
[Signature]	[Signature]	[Signature]
First issue date		May 28, 2018



Technical drawing list was checked

2.1.2 WPS documents check

Valve factory has WPS documents, but none of them is for this project. And TUV SUD inspector asked them to make a special WPS for it. Following are specimens of WPS.

Material chemical&mechanical analysis



Chemical composition



钢锭质量证明书 Forging Ingot Quality Certificate

客户名称(Customer): 无锡江南锻造件制造有限公司
合同号(Contract No.): LTDC120008

质量证书编号(Quality Certificate No.): 12041602
交货日期(Date of Delivery): 2012.04.16

产品名称(Product Name)		钢 锭		冶炼方法(Steelmaking Method)		EHT+LF+VD		交货标准(Standard)		GB/T999-1999					
钢种(Steel Species)		45#		锭型(Ingot Type)		HT		支数(Numbers)		1支		锻造状态(HT Condition)		正火	
炉号(Furnace No.)		化 学 成 分 / Chemical composition (%)													
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Al	Pb	Bi		
120-008		0.45	0.23	0.60	0.013	0.012	0.05	0.00	0.05	0.01	0.010	0.1	0.01		
本产品已按上述要求进行了制造和检验, 其结果符合要求, 特此证明。 This product has been manufactured by the above-mentioned conditions and testing, the results meet the requirements, and would like to prove.															
最终检验 FINAL RESULT		合格 PASS		注意事项 ATTENTIVE ITEMS		复印件 COPY UNLESS									

地址: 江苏省无锡市梅村镇环湖路118号
邮编 (Zip): 215511
电话 (Tel): 0086-0510-82061086

Address: No.118 Huailu Road, Meitown, Changshu City, Jiangsu Province, China
传真 (Fax): 0086-0510-82200772 售后服务电话 (Complaint): 0510-82061086
http: //www.jg.cn E-mail: jg@jg.cn

Certificate of welder & NDT



Industry Service

2.2 Welder certificate check

INSPECTION REPORT

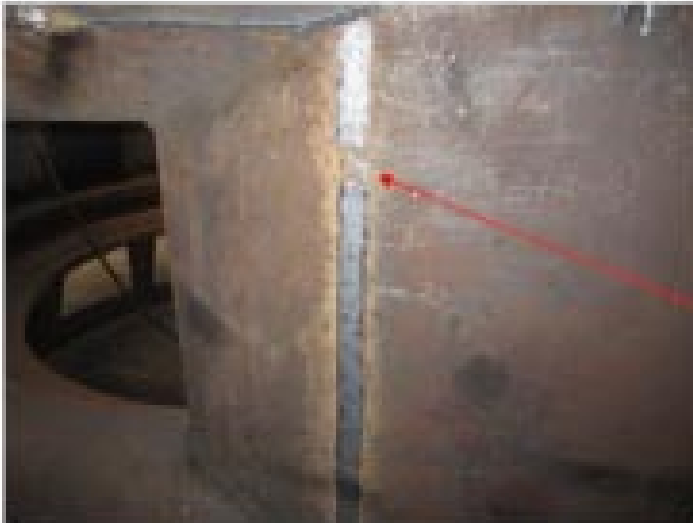
2.2.1 Certificates of NDT



Generator factory NDT-Tiangang



Welding quality visual inspection



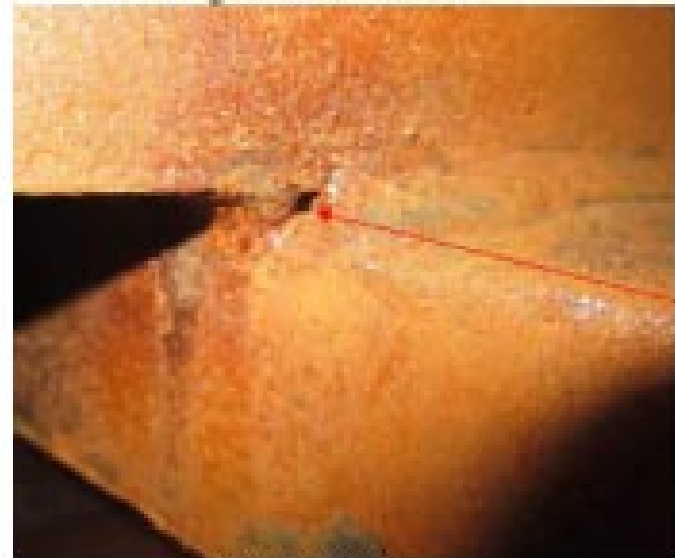
Only one 45° slope-cutting has been fully welded, but grinding is still needed.



Welding seam is not sufficient.



Breach shall be repaired.



Defected welding



Three upper brackets are annealed. MT is finished.

UT, MT, PT test



Defect was found



No defect was found

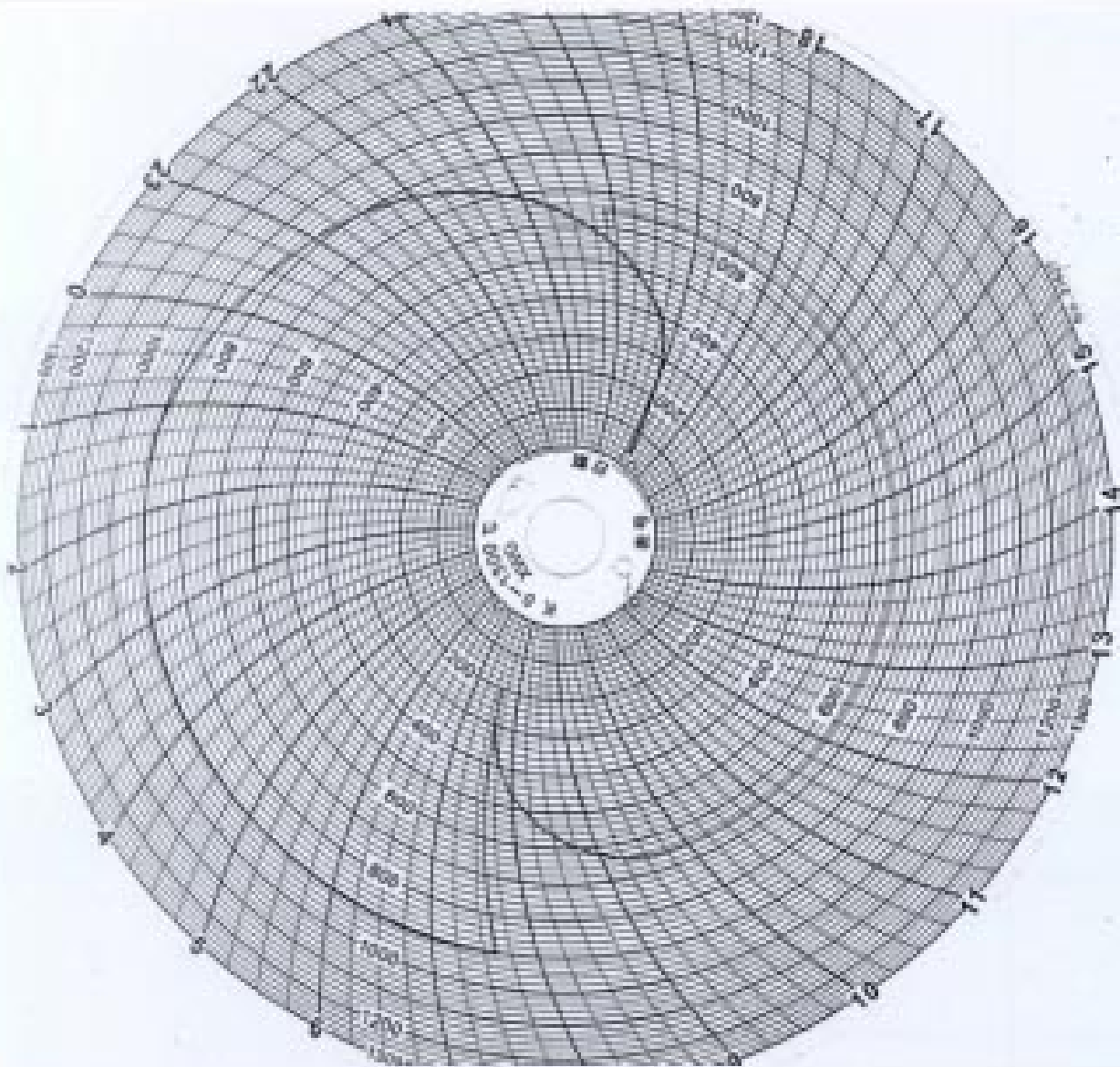


UT testing on end face and around body of a magnetic yoke, the test result is acceptable.



Witness MT

Heat treatment inspection



HTN 1234567890
MAT 1234567890
HTN 1234567890
MAT 1234567890

HTN 1234567890
MAT 1234567890
HTN 1234567890
MAT 1234567890

Sand blasting visual inspection



Sand blasting manual



Antirust priming paint



In process of assembling and adjusting



Fitting generator stator plates



In process of assembling and adjusting

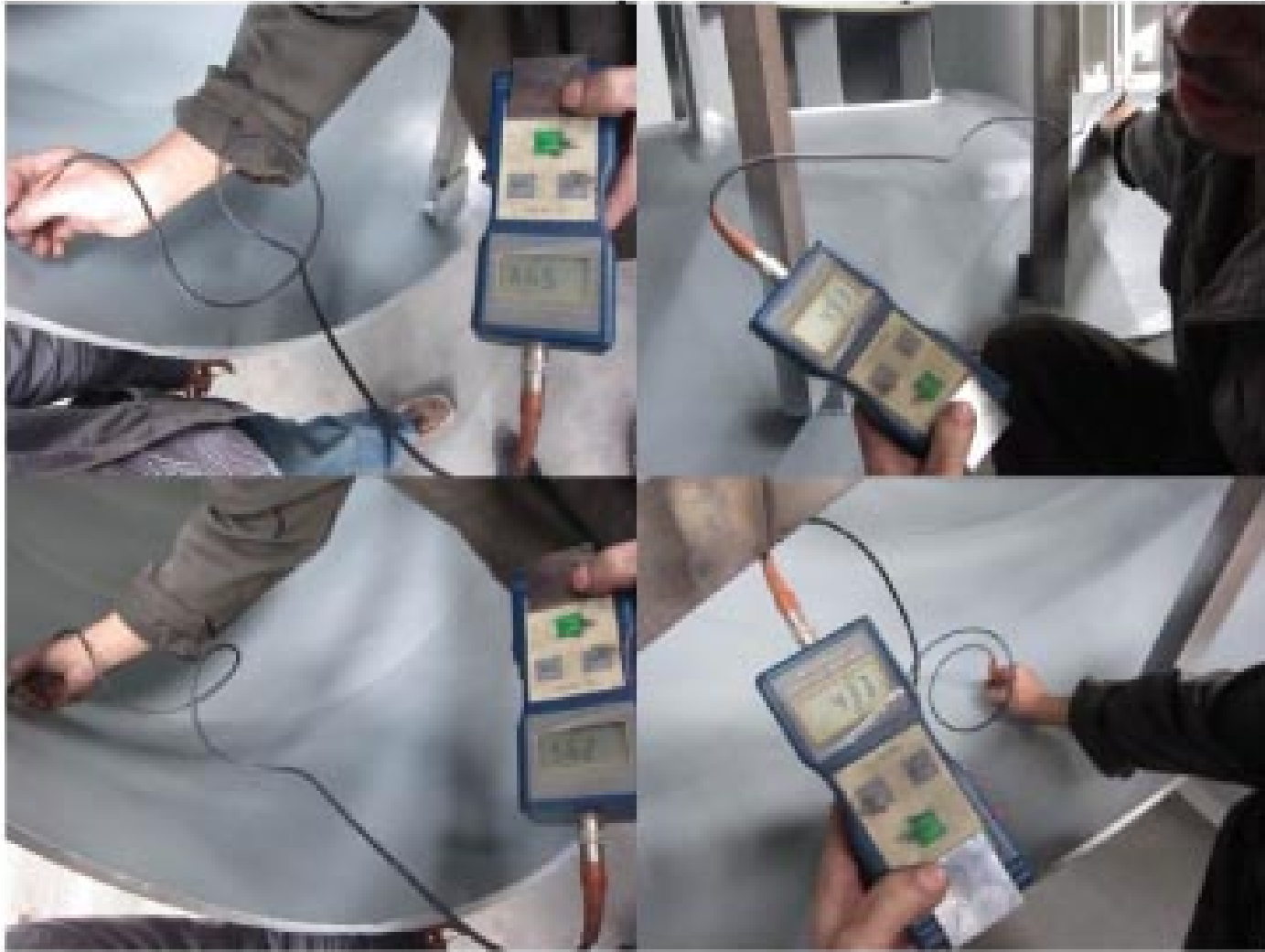


Runner hub is in process of fixing brass bush.



Fixed brass bush

Calibration before paint thickness test



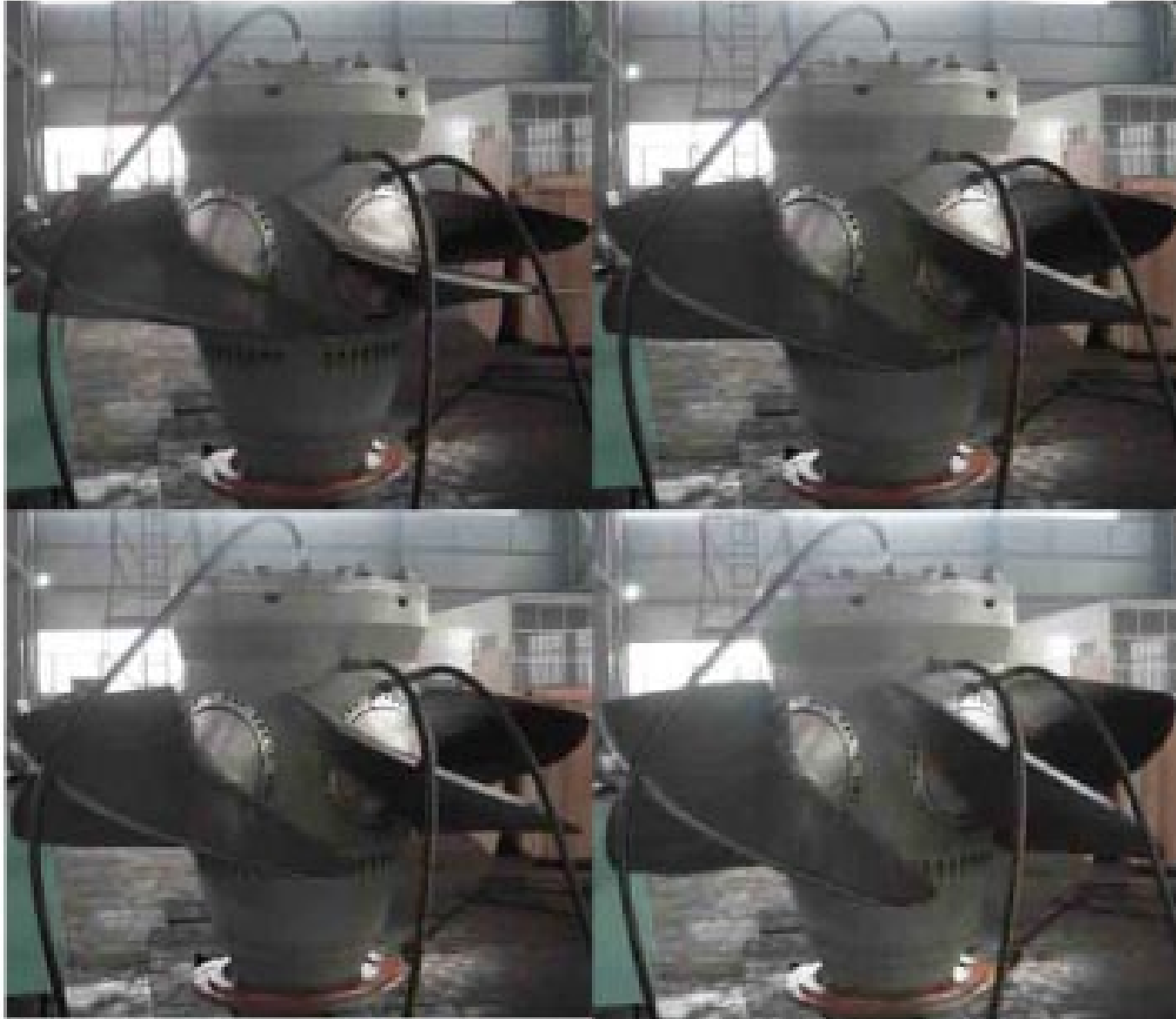
Rotor dynamic balance test



Kaplan runner static balance test



Adjustable runner blade move test



After final paint and packing









