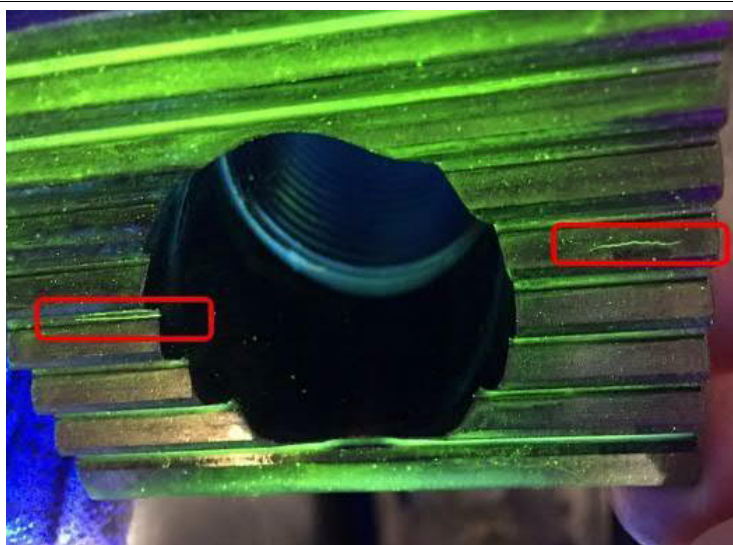


1. Con-rod measurement record

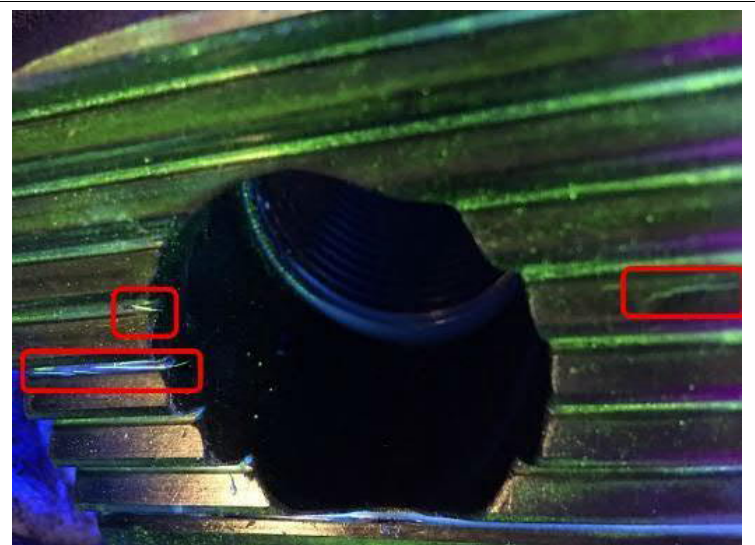
PRE-INSPECTION		Item	L	M	N	Z-P		
		Mark No.						
		BL1406L	600.00					
		BL1409L	600.00					
		BL1408L	600.00					
		BL1410L	600.00					
		LR0954104 22	600.00					
		LR0954104 14	600.00					
Big end original size: ϕ 195.00mm		Small end original size: ϕ 98.00mm						
Item		Big end					Small end	
Mark No.		A	B	C	D	E	F	G
BL1406L	F	-0.02	+0.06	+0.01	-0.05	-0.06	+0.23	+0.12
	A	-0.01	+0.07	0.00	-0.06	-0.06	+0.24	+0.13
BL1409L	F	-0.02	+0.10	+0.02	-0.09	-0.09	+0.22	+0.15
	A	-0.01	+0.10	+0.02	-0.10	-0.09	+0.27	+0.15
BL1408L	F	-0.02	+0.09	+0.02	-0.07	-0.06	+0.23	+0.15
	A	0.00	+0.10	+0.02	-0.06	-0.05	+0.25	+0.17
BL1410L	F	-0.01	+0.07	+0.01	-0.07	-0.05	+0.26	+0.17
	A	0.00	+0.08	+0.01	-0.06	-0.06	+0.26	+0.17
LR0954104 22	F	+0.07	+0.04	+0.02	-0.09	-0.12	+0.25	+0.18
	A	+0.04	+0.08	+0.01	-0.05	-0.09	+0.26	+0.17

Engine Type	MAN B&W 23/30				Class		NA	
LR09541 04 14	F	+0.08	+0.02	+0.01	-0.08	-0.06	+0.23	+0.17
	A	+0.10	+0.04	+0.03	-0.10	-0.08	+0.25	+0.17
Remark	Long & deep cracks were found on con-rods (LR0954104 22 and LR0954104 14) serration surface by MPI, beyond repair. And found all con-rods: small end bushes worn down near to usage limit: 0.25mm, suggest to renew. Hydraulic tighten is 750bar.							

2. MPI testing photos



Cracks at con-rod **LR0954104 22**, beyond repair



Cracks at con-rod **LR0954104 14**, beyond repair

3. Recommendations

1. Long & deep cracks were found on 2 pcs con-rods (**LR0954104 22** and **LR0954104 14**) serration surface by MPI, beyond repair, to be scrapped
2. **Other 4 pcs con-rod bog end bores** are to be re-boring and all small end bushes are to renew.

Inspected by	Recommended by	Approved by	Approval Date
Alan Fang	Owen Xie	ZM Yan	2020-04-20