

WORK.NO. 20-0000

E/TYPE.

P/NAME. CYLINDER LINER

MARINE GIKEN SERVICE CO., LTD

April 11, 2020

JIS B 0601-2001

Parameter

SJ-310 ホーニングマシーン

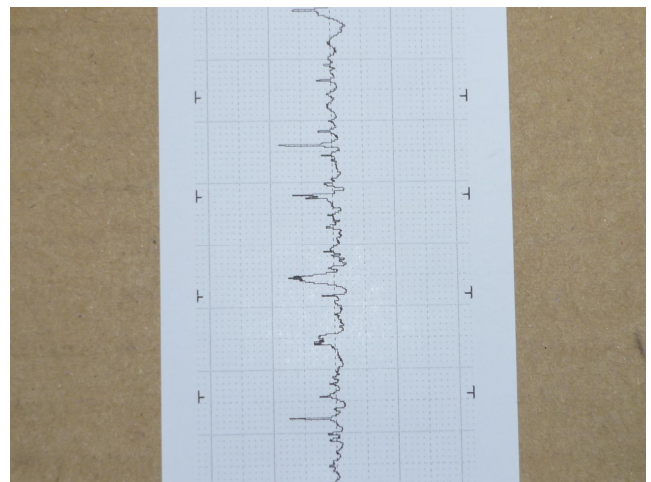
NO. 001101208 型式 CVA-1500RC SERIAL NO.12493

Surface Roughness Condition. (表面粗さ)



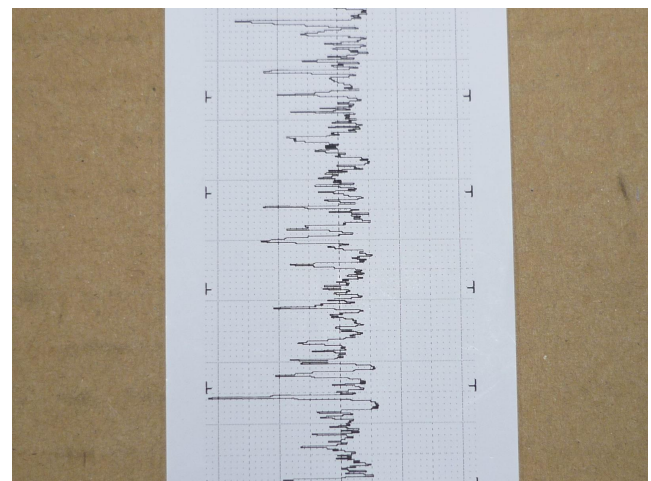
Existing condition: Lacquering was formed on piston ring moving surfaces and not enough oil sump grooves and occurred hard touching part on axial direction.

修正前 リング摺動面、油溜りが無くなり、縦方向に局所的な当り発生。

Ra: 0.46 μm RzJIS: 2.30 μm Standard: RzJIS 3~7 μm 

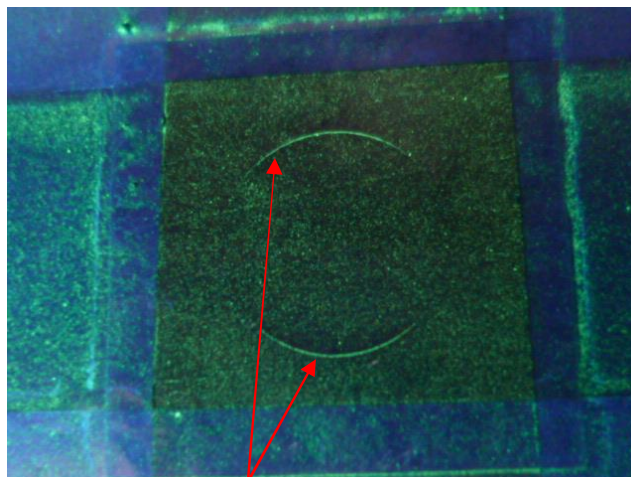
After honed liner.

プラトーホーニング完成後

Ra: 1.48 μm RzJIS: 6.51 μm



A-type test piece for check equipment.
磁気探傷検査 機材確認用 A 形標準試験片



Found crack.
A 形標準試験片 クラック確認

Magnaflux Inspection Component

Model of Magnaflux Unit (磁気探傷器名称) Um-3BF 電子磁気工業(株) NO.1250111086

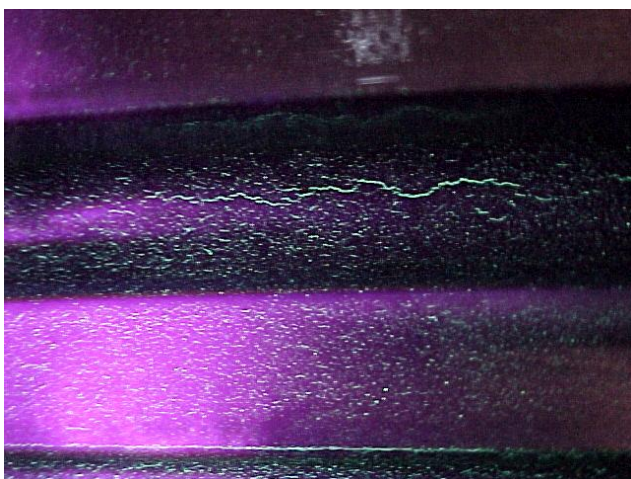
Model of Ultraviolet Unit (紫外線照射装置名称) LB-104 電子磁気工業(株) NO.0145

Method (磁化方法) Yoke (極間法)

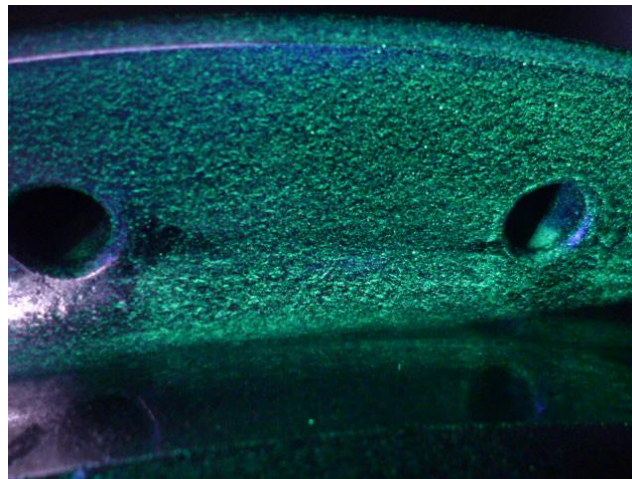
Model of A-type test piece (A 形標準試験片) JIS Z 2320-1:2007 A1-15/50

Examiner (検査技術者) Yosuke Kimura (木村 洋介)

License NO. JIS Z 2305(ISO 9712) N10090923



Example of crack: The crack occurred at under of the liner mounting surface.
ライナー罅下クラック発生見本



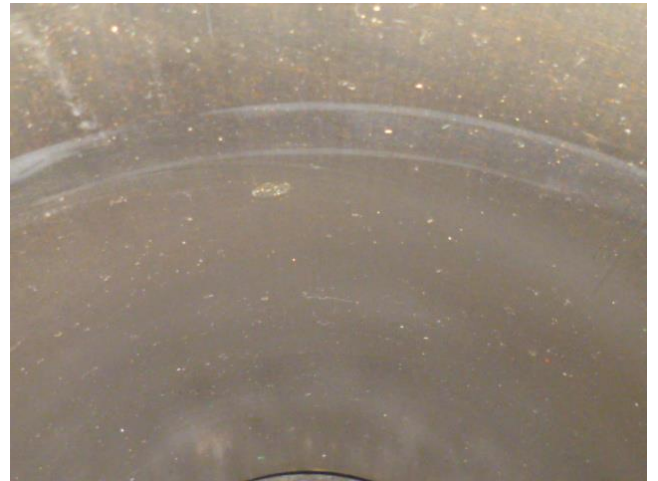
Inspected 1 pc not found crack.
検査対象 1 本 欠陥磁粉模様無し
NO.◎M187C



Arrival of goods condition. 1 PC 受入



Poor Conditions specially no uniform touching with Liner and piston ring. 内面当たり不良



Blow by. 吹き抜け傷

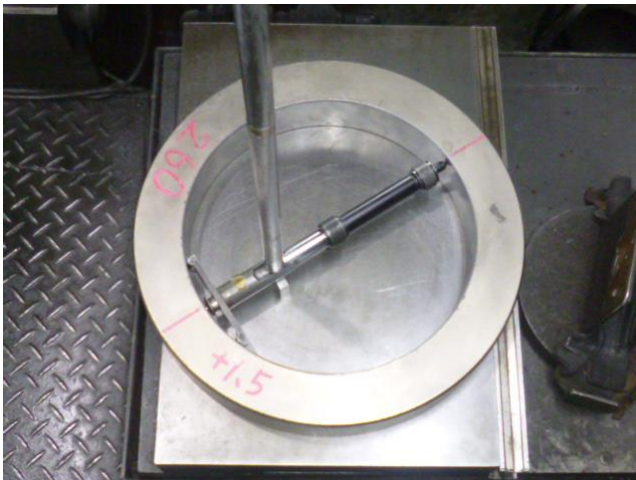




Blow by. 吹き抜け傷



About 38 mm. 約 38 mm



Bore gauge set up. 基準ゲージにて0設定



Housing measurement. 内径計測



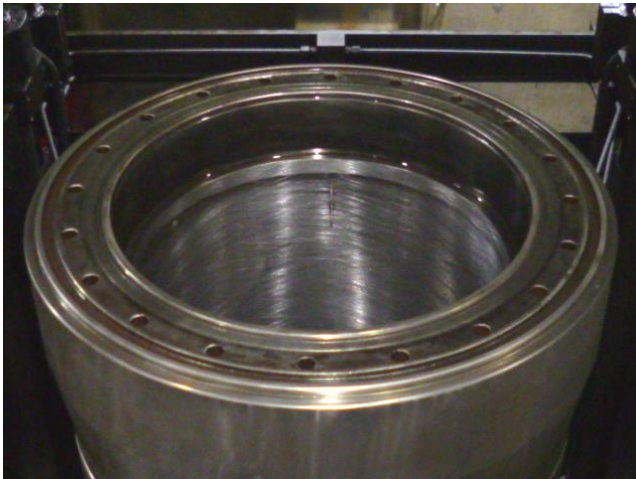
Blow by part laser welding. 吹き抜け傷部 レーザー溶接肉盛



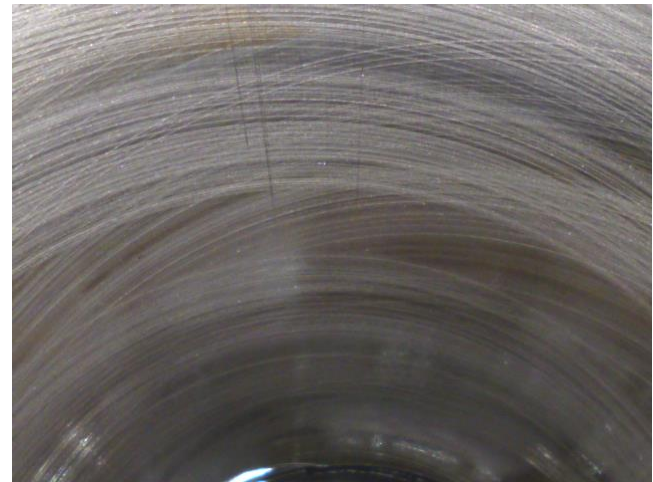
Setting. 機械にセッティング



Liner honing. ホーニング加工

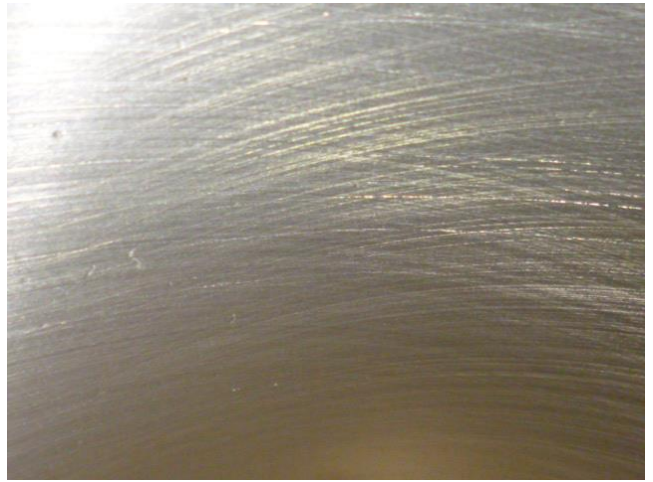
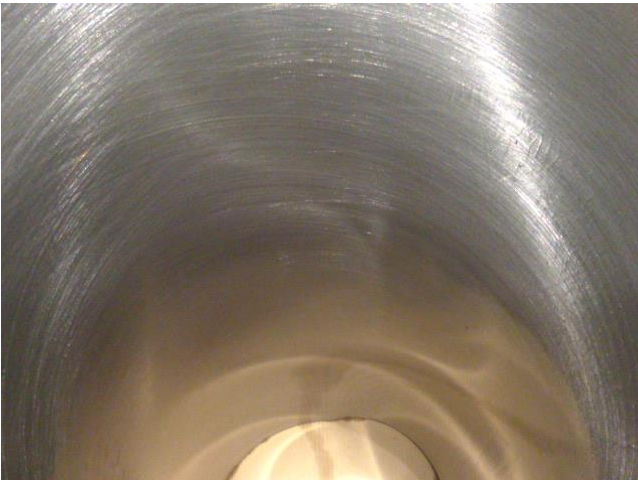
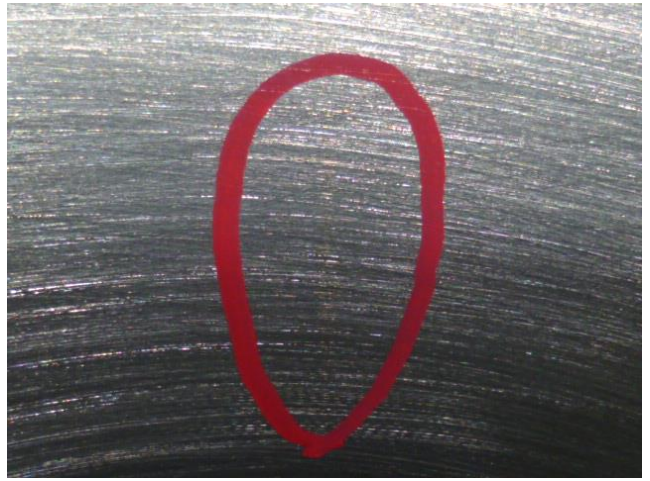


Progress of the Liner Honing. ホーニング途中



Finished liner honing. プラトーホーニング完成







Before cleaning. 掃除洗淨前



Before cleaning cooling water hole. 冷却水孔 洗淨前



High pressure cleaning. 高压洗淨





After cleaning. 掃除洗淨後



After cleaning cooling water hole. 冷却水孔 洗淨後



After coating. 外周塗装、完成

