



GAS TURBINE SERVICES

PART OF HKJ GROUP

Borescope Report – SGT100

Information	
Customer: Mærsk Olie & Gas AS	Service Centre: Gas Turbine Services A/S
Address: Britaniavej 10 6700 Esbjerg	Address: Service Department Murervej 2-6 6710 Esbjerg V Denmark
Site Location:	Contact:
Report to: [redacted] Olsen	Siemens contact:
Telephone:	Telephone:
Telefax:	E-Mail:
E-Mail:	E-Mail:
Turbine Info	
Turbine Type: Typhoon	Operating Hours: 39121
Turbine Duty: Generator	Recorded Starts: 2198
Engine Serial No.: 9100/111 core sn RM272	
Original Sales Order No.: M466/01	
Customer Order No.: SO 3500151730	Service Order No.: 201235
Remarks:	
Boroscope Inspection on	
Period of visit	Service Personnel
From: 19/09-2016	Name
Until: 21-09-2016	1. [redacted] teer
	2. [redacted]
	3. [redacted]
	4. [redacted]
	5. [redacted]

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1. Introduction

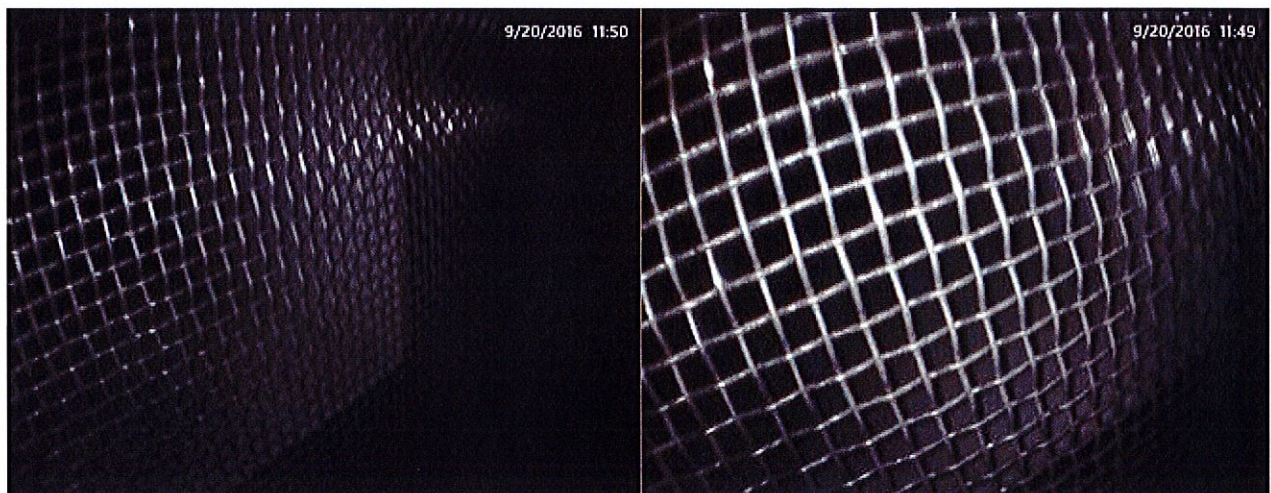
The engine was not washed prior to the borescope inspection. It had aprox. 10 days of running since last wash.
The engine has run aprox. 13000 hours since installation.

2. Inspection of Machine

Borescope Inspection

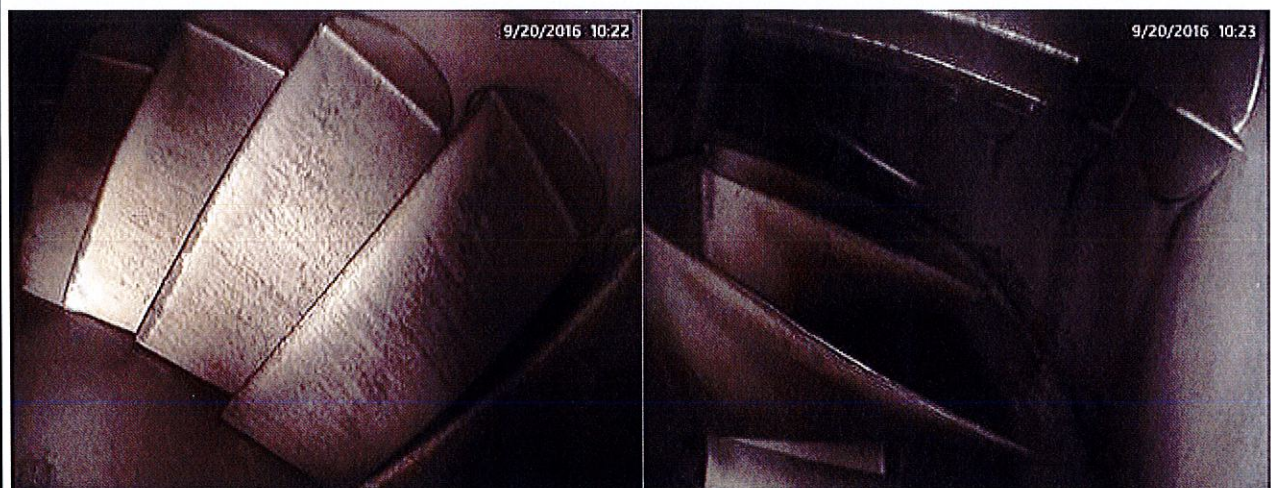
1.0 Air Inlet Screen:

Notes: Good condition. No objects found on the screen



2.0 Inlet guide vanes

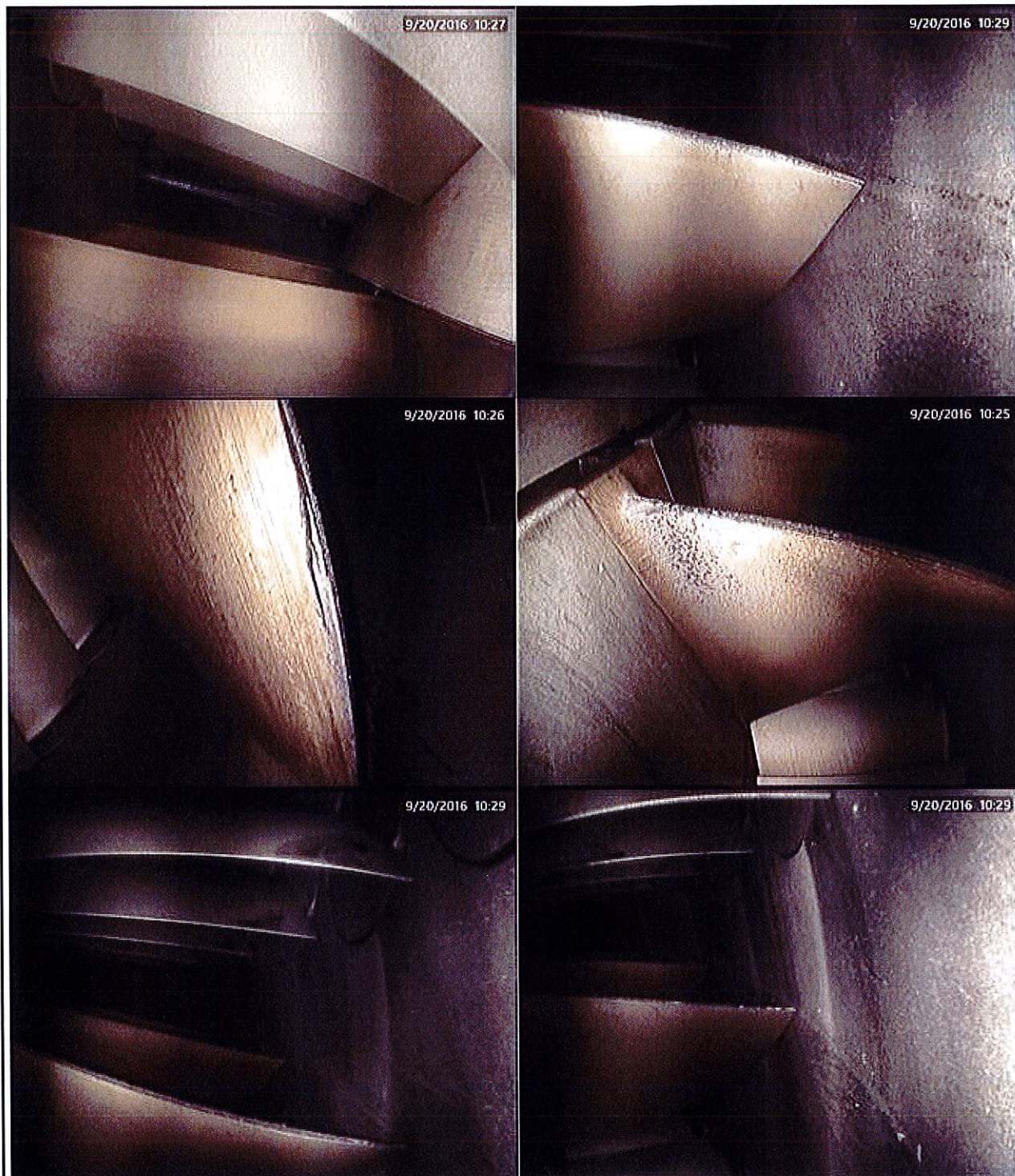
Notes: Good condition. Clean.



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3.0 Stage 1 Compressor Rotor

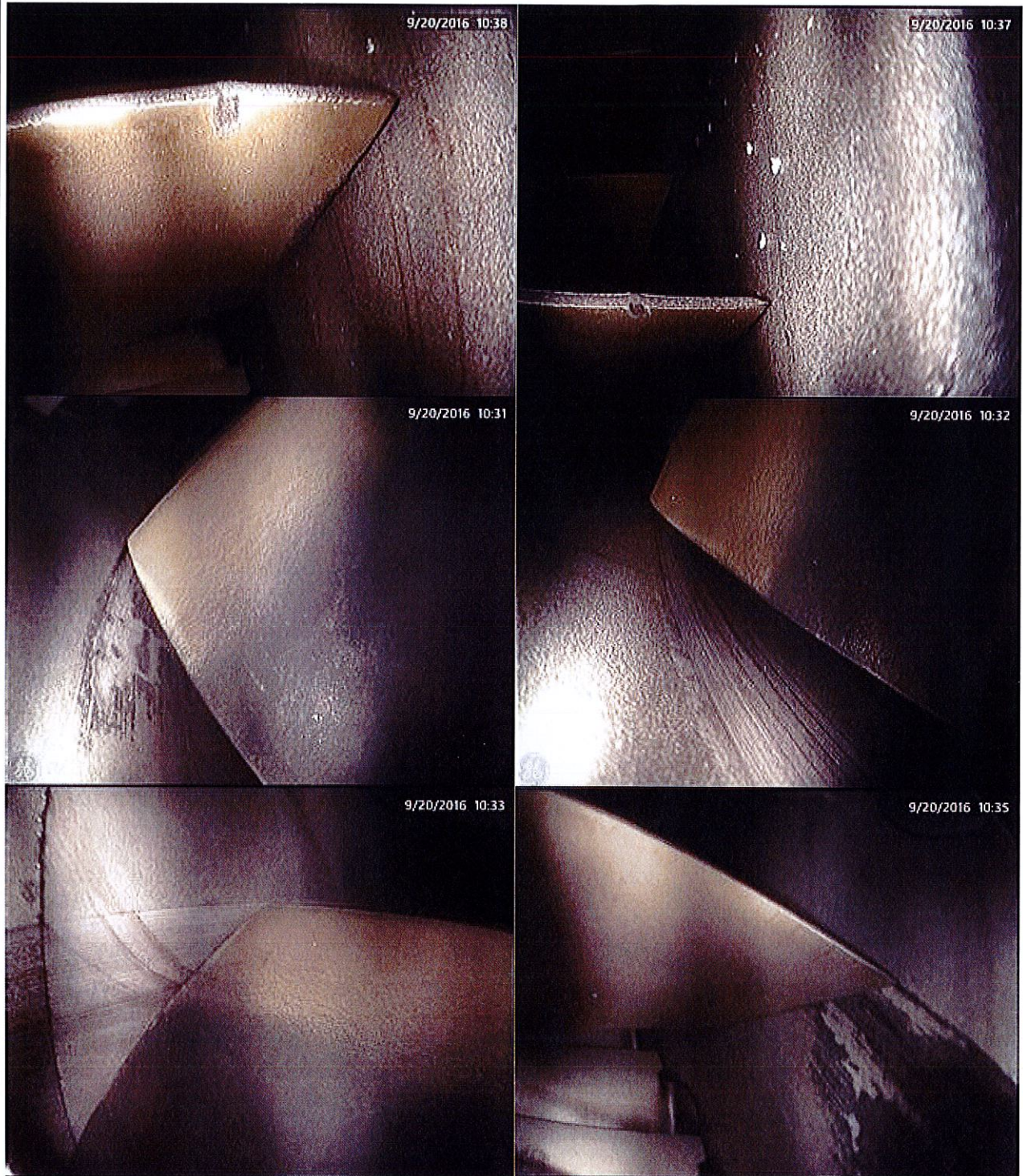
Notes: Good condition. Clean. No FOD damage. Slight coating loss on the leading edge and root of blade.



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4.0 Stage 2. Compressor rotor

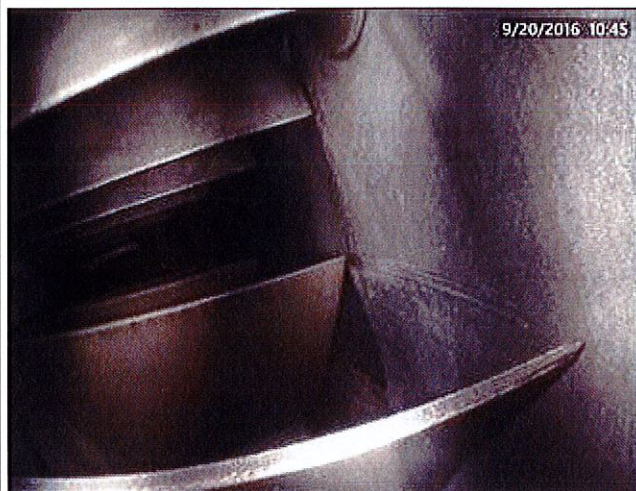
Notes: FOD damage on one of the blades. There is a small amount of tip rub. Also slight coating loss on the casing.
Slight coating loss on blade leading edge



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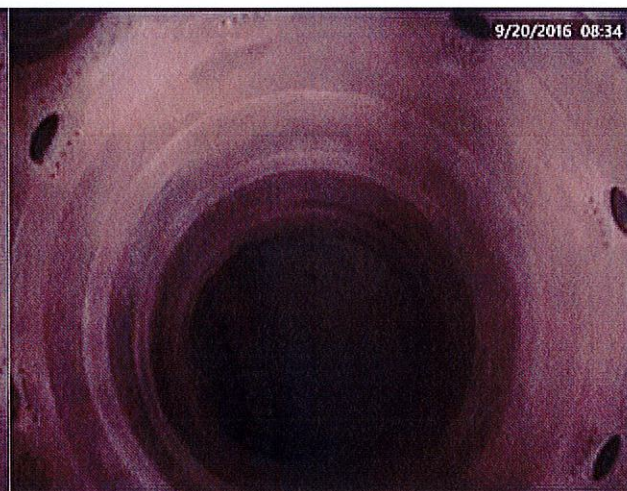
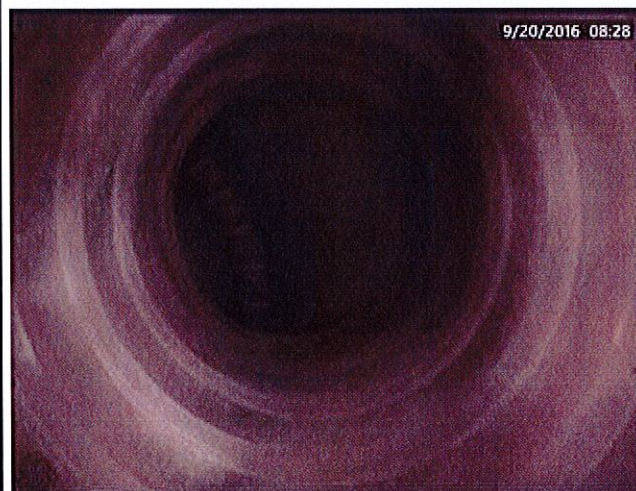
5.0 Stage 3 Compressor rotor

Notes: Good condition. no FOD damage. Small amount of tip rub.
Slight coating loss on leading edge.
Good clean condition.

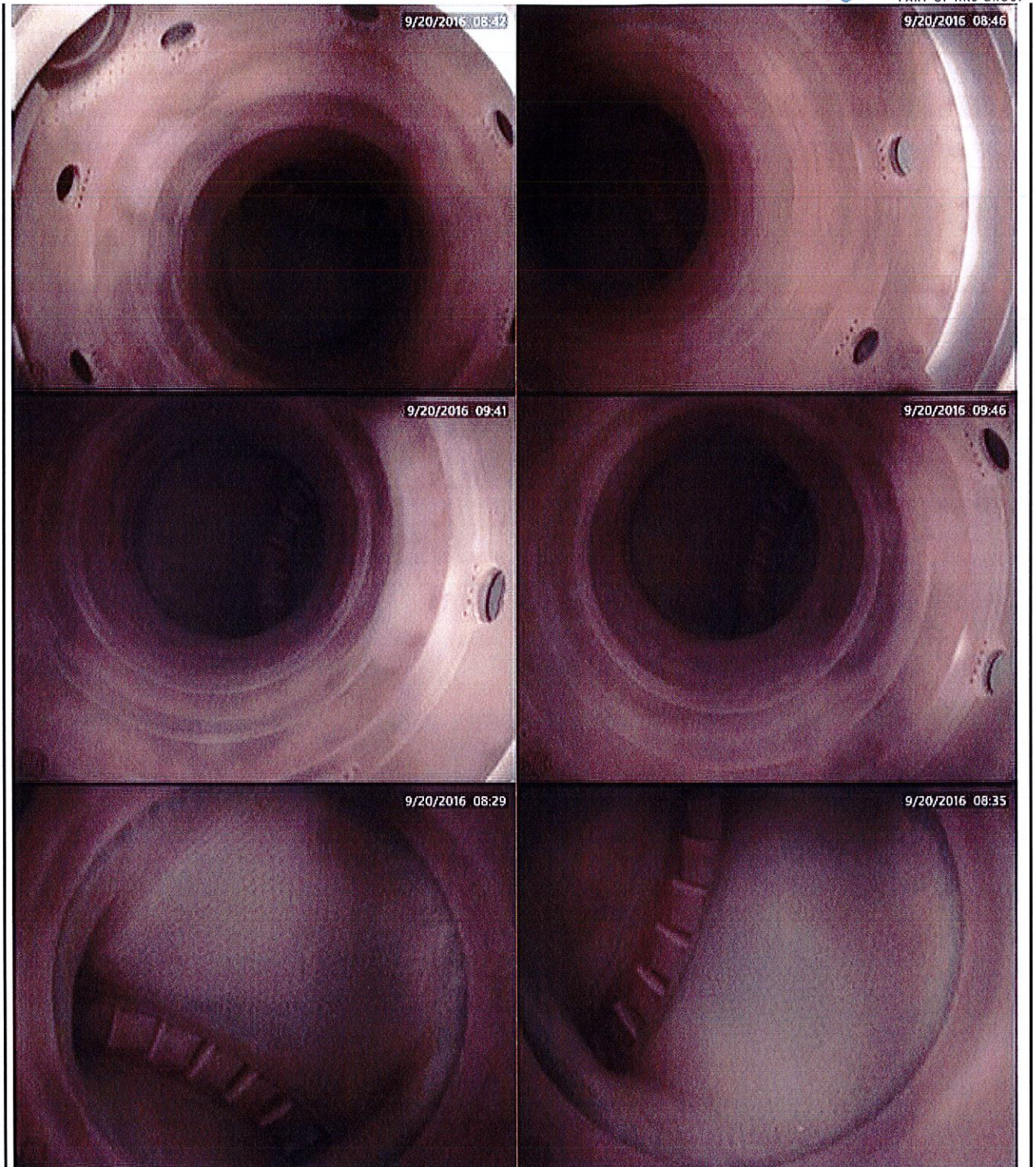


6.0 Flame tubes and transition Ducts

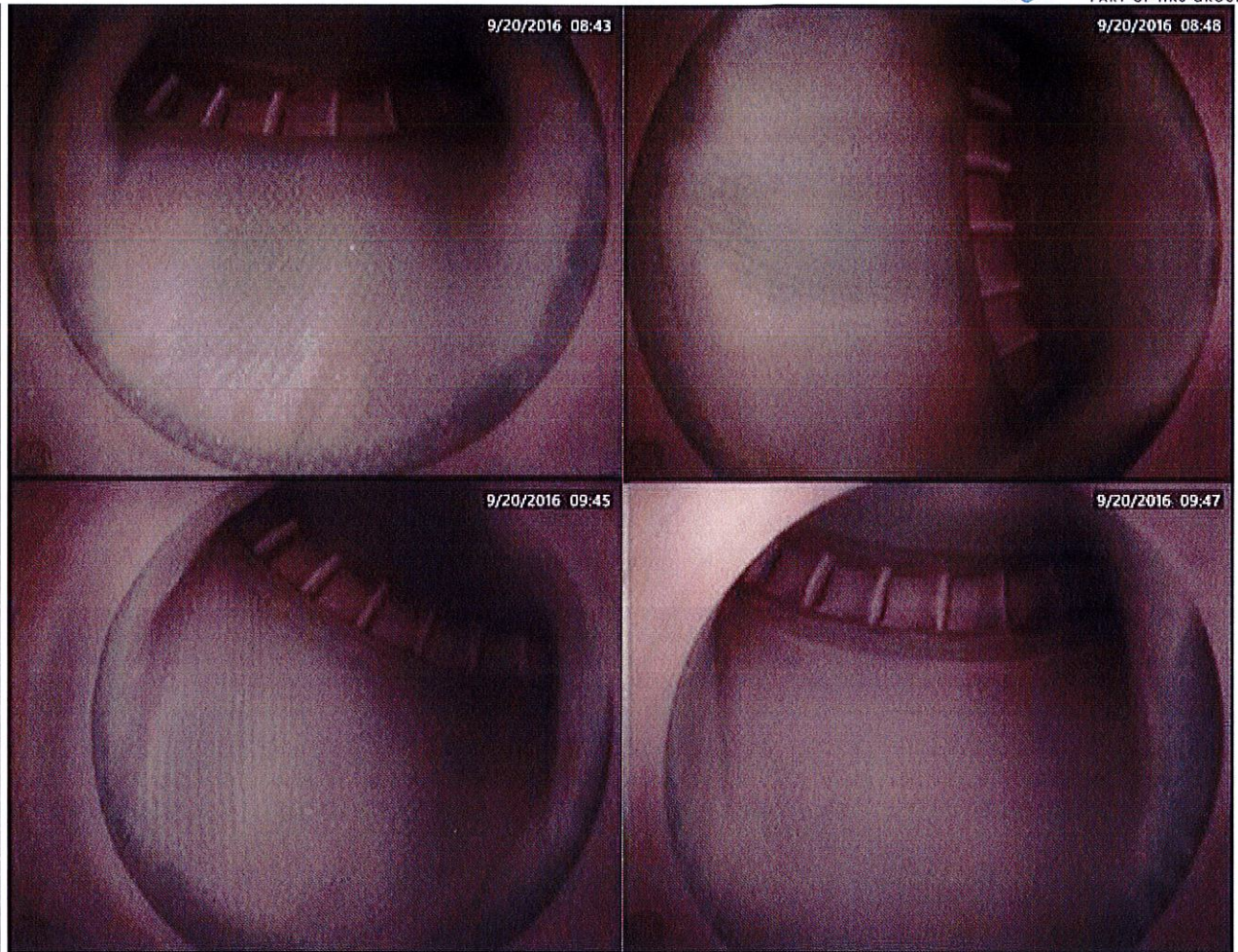
Notes: All looks in good condition. No coating loss, cracks or distortion.



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6.2 Igniter Tip

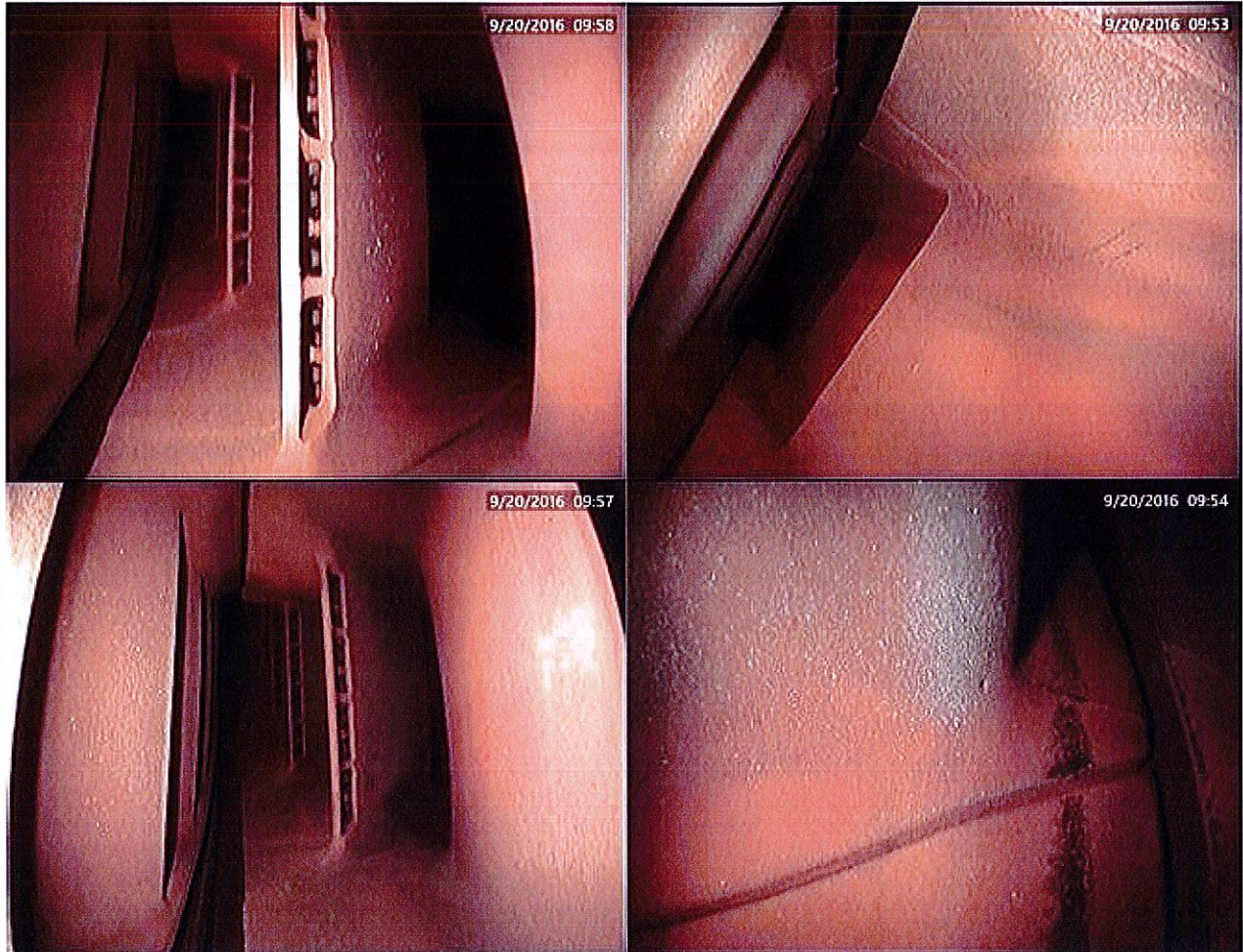
Notes: Good condition



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7.0 HP rotor and stator inspection

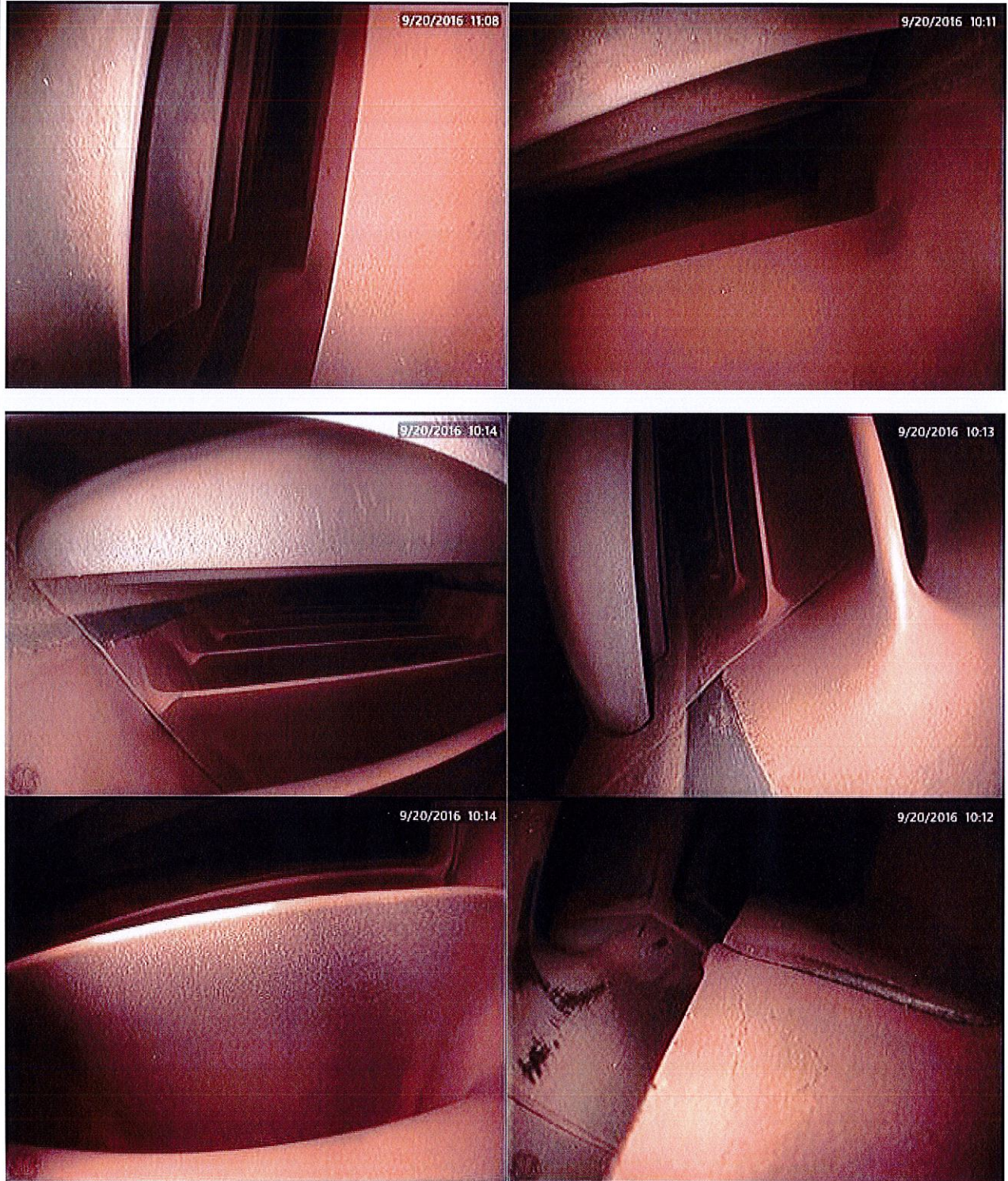
Notes: Looks in good condition. No heat erosion or cracks. Small amount of particle build up on the HP nozzles and the leading edge HP rotor blades.



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8.0 LP stator and rotor inspection.

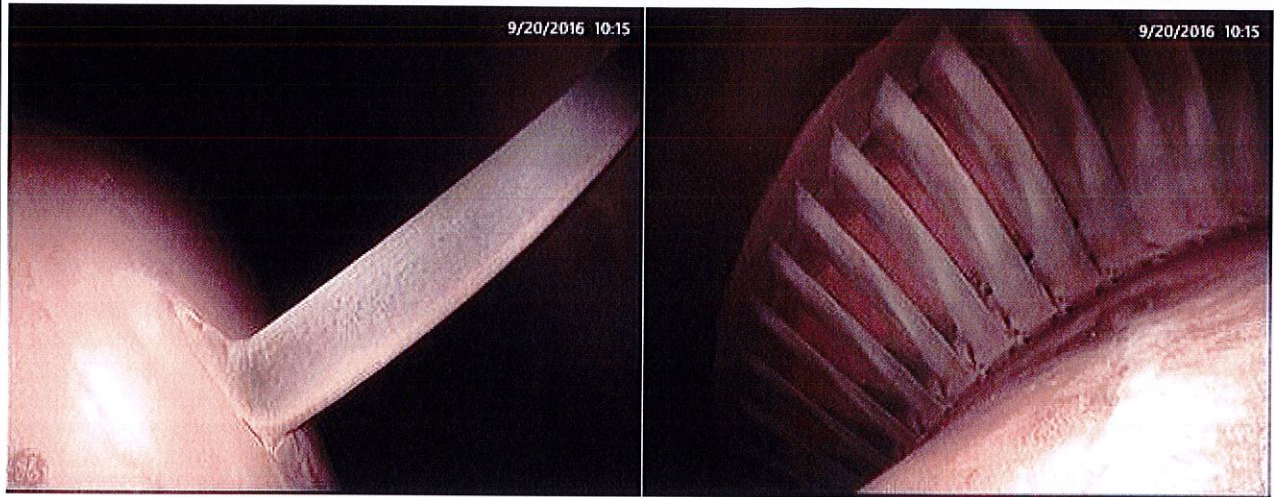
Notes: Looks in good condition.



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9.0 Exhaust gas exit areas

Notes: No remarks



3. Conclusion / recommendations

The engine looks to be in good condition.

The compressor looks like it has ingested some particles at some point. It could have come from nearby sandblasting. It is nothing major, it has just left some wear patterns in the compressor coating.

The tip rub in compressor stage 2 and 3 could be as a result of the increased vibration during hot starts. The vibration levels under normal operation is ok.

The washing intervals looks sufficient as the compressor is nice and clean.

Signed by 20.09.2016 Date/Signature	Approved by 22-09-2016 Date/Signature
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