

MILOP Design and Consulting Pty Ltd

Mechanical and steel structure engineering, design & consulting. Concrete pumping equipment, tower cranes, inspection and certification. Professional engineer

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**STG Pumps Pty Ltd
Po Box 134
MOOREBANK, NSW, 1875**

Attn: Joe Bassil

**RE: Concrete Boom Pump, Powercrete / Antonelli 46m,
Inspection Report and Certification for Continued Services
Report no: 2765/23, 01st May 2023**



The concrete boom pump Powercrete / Antonelli 48m was inspected on the 01st May 2023 in the Riverstone Rd, Moorebank.

The concrete boom pump was inspected in assembly conditions. The boom and outriggers were opened and the boom arms unfolded.

The inspection is a regular periodic boom pumps inspection, as required by AS 2550.15 – Concrete Placing Equipment, and it presents an assessment of structural conditions for continued service of the plant at the time of the inspection.

The concrete boom pump's technical specifications:

Boom and pump manufacturer:	Antonelli / Powercrete
Model and size:	M45/6Z/125-BT46
Boom / pump serial number:	MA0074
Hydraulic operating pressure	350 bar
Concrete piping	ND 125mm
Hydraulic pressure boom / pump	370 bar / 300 bar
Max concrete pressure	110 bar
Working hours	3666 hr
Year of manufacture:	2017
End hose	4 m
Truck Volvo FM12 rego plates	AZ20TV

The concrete boom pump has received a periodic inspection in accordance with the criteria in AS 2550.15:2019, Clause 6.4.

Details of the periodic inspection are enclosed.

Following AS 2550.15:2019, the next inspection is recommended after 500 operating hours or before the 101st of May 2024.

01st May 2023

Inspected by:
Michael Podinic, BScME, MIEAust*

PERIODIC INSPECTION REPORT - Details

Pump details		
Manufacturer / Model POWERCRETE / T 130-203-2400	Serial number STG.2EP180.02	Year of manufacture 2009
Maximum hydraulic system pressure 300 bar	Maximum concrete delivery pressure Rod side 115 bar	

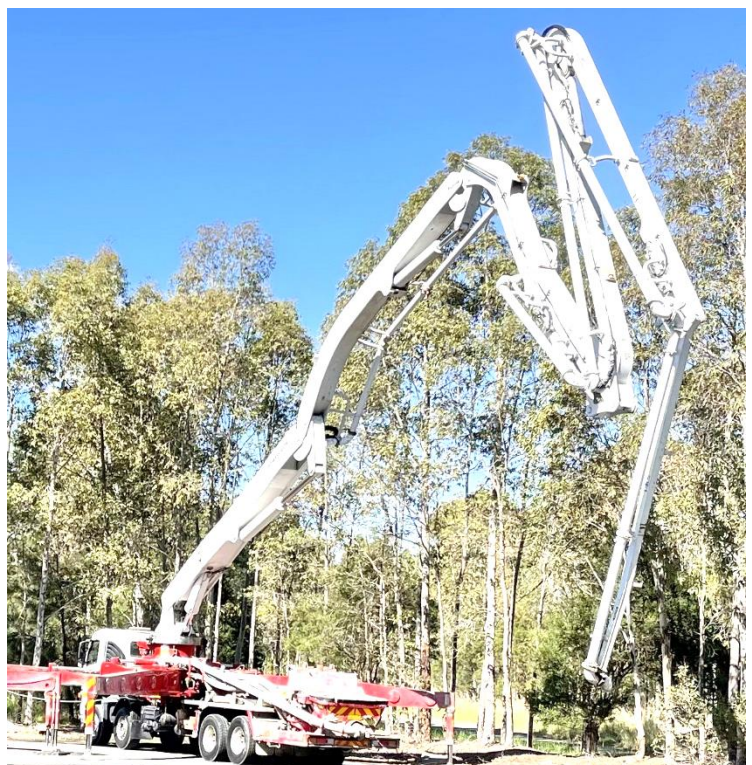
Boom details		
Boom manufacturer / model M45/6Z/125-BT46	Boom serial number MA0074	YOM of the boom 2017
Type of boom Truck mounted, six stages M45/41/6/125	Max horizontal reach (from the centre of slew ring) 41 m	Max rated working pressure of the pipes 85 bar
Max pipe diameter 125 mm (5")	Operating pump hours Total 3666 hr	
Max drop hose diameter 125mm (4")		

Carrier information (Truck)	
Carrier manufacturer VOLVO FM MK2	Rego plate AZ 20TV

Date 01st May 2023
 No. of defects and safe to use **None**
 Stop operation until defects
 are addressed **No**
 Reinspection required **No**

Inspected:

Michael Podinic, BScME, MIEAust
 m. 0413 424 819.
 milop@tpg.com.au
 www.milop.com.au

PERIODIC INSPECTION REPORT – Details
(In accordance
with AS 2550.15:2019)

Owner/Controller details	
Owner/Controller of the concrete equipment:	STG Pumps Pty Ltd
Location of inspection	Riverside Rd, Chipping Norton
Names of people involved in the inspection	Joe

Fault code

00	No objections	08	Corrosion	16	Porous	24	Deformation
01	Cracks	09	Damaged paint	17	Burnt out	25	Bearing clearance
02	Broken	10	Worn through	18	Loose	26	Lubrication
03	Leaking	11	Scored	19	Jammed	27	Legibility
04	No function	12	Bent	20	Judders	28	Parts missing
05	Short life	13	Noise	21	Soiled	29	Hydraulic
06	Wear	14	Vibration	22	Loose contact	30	Electrical
07	Chips	15	Others	23	Temperature	31	Re-inspection required
A1	Not available	A2	Inadequate information				

Item	Description	Fault code	Method of inspection	Acceptance criterion	Observation	Status	Photos (Y/N) Remarks
100	Machine documents						
	Instruction handbook		Visual	Exist		Ok	N
	Spare-parts list		Visual	Exist		Ok	N
200	Support structure		Visual	No faults	No objection	Ok	N
	Frame attachment		Visual	No faults	No objection	Ok	N
300	Front outriggers R + L						
	Transport lock		Visual	Automatic device lock	No objection	Ok	N
	Outriggers		Visual	No crack, no corrosion distortion	No objection	Ok	N
	Extension box 1		Visual	No crack, no corrosion	No objection	Ok	N
	Extension lock		Visual	Automatic	No objection	Ok	N
	Pivot bearing		Visual	Automatic	No objection	Ok	N
	Pivot safeguard		Visual	Automatic	No objection	Ok	N
	Outrigger safeguard		Visual	No faults	No objection	Ok	N
	Outrigger lock		Visual	Functional locking device	No objection	Ok	N
	Outrigger cylinder attachment		Visual	No faults	No Objection	Ok	N
	Outrigger cylinder		Visual	No faults	No objection	Ok	N
	Pivot cylinder		Visual	No faults	No objection	Ok	N
	Extension hydraulics		Visual	No leak	No objection	Ok	N
Pressure setting		Visual	Factory setting	No objection	Ok	N	
400	Rear outriggers R+L						

	Transport lock		Visual	Automatic device lock	No objection	Ok	N
	Outriggers		Visual	No crack, no corrosion distortion	No objection	Ok	N
	Extension box 1		Visual	No crack, no corrosion	No objection	Ok	N
	Extension lock		Visual	Automatic	No objection	Ok	N
	Pivot bearing		Visual	Automatic	No objection	Ok	N
	Pivot safeguard		Visual	Automatic	No objection	Ok	N
	Outrigger safeguard		Visual	No faults	No objection	Ok	N
	Outrigger lock		Visual	Functional locking device	No objection	Ok	N
	Outrigger cylinder attachment		Visual	No faults	No Objection	Ok	N
	Outrigger cylinder		Visual	No faults	No objection	Ok	N
	Pivot cylinder		Visual	No faults	No objection	Ok	N
	Extension hydraulics		Visual	No leak	No objection	Ok	N
	Pressure setting		Visual	Factory setting	No objection	Ok	N
Remarks:							
500	Concrete-placing boom pedestal (common)						
	Concrete-placing boom pedestal		Visual	No faults	No objection	Ok	N
	Superstructure frame		Visual	No faults	No objection	Ok	N
	Chassis frame		Visual	No faults	No objection	Ok	N
	Concrete-placing boom support		Visual	No faults	No objection	Ok	N
	Transport locks and seats		Visual	No faults	No objection	Ok	N
	Hydraulic line		Visual	No faults	No objection	Ok	N
600	Slewing head with ball pivot connection						
	Slewing head		Visual	No faults	No objection	Ok	N
	Ball-mounted slewing ring		Visual,	Max play 1.5 mm	No objection	Ok	N
	Ball-mounted slewing ring		Visual	All bolts tightened	No objection	Ok	N
	Drive pinion		Visual	No faults	No objection	Ok	N
	Slewing drive attachment		Visual	No faults	No objection	Ok	N
	Slewing limitation		Visual	Slewing limited by switches	No objection	Ok	N
	Slewing drive (gearing clearance)		Visual	1.1 mm	No objection	Ok	N
	Slewing drive		Visual	No faults	No objection	Ok	N
	Brake function		Visual	No faults	No objection	Ok	N
	Speed		Measuring	1 rev/ 2.5 min	No objection	Ok	N
	Pressure setting		Visual	Factory Setting	No objection	Ok	N
	Hydraulic lines		Visual	No faults	No objection	Ok	N
Remarks							
	Concrete-placing boom						
810	Arm 1		Visual	No faults	No objection	Ok	N
	Guide and rest of the arm		Visual	No faults	No objection	Ok	N
	Delivery-line support		Visual	No faults	No objection	Ok	N
820	Arm 2		Visual	No faults	No objection	Ok	N
	Guide and rest of the arm		Visual	No faults	No objection	Ok	N
	Delivery-line support		Visual	No faults	No objection	Ok	N
830	Arm 3		Visual	No faults	No objection	Ok	N
	Guide and rest of the arm		Visual	No faults	No objection	Ok	N
	Delivery-line support		Visual	No faults	No objection	Ok	N
840	Arm 4		Visual	No faults	No objection	Ok	N

	Guide and rest of the arm		Visual	No faults	No objection	Ok	N
	Delivery-line support		Visual	No faults	No objection	Ok	N
850	Arm 5		Visual	No faults	No objection	Ok	N
	Guide and rest of the arm		Visual	No faults	No objection	Ok	N
	Delivery-line support		Visual	No faults	No objection	Ok	N
860	Arm 6		Visual	No faults	No objection	OK	N
	Guide and rest of the arm		Visual	No faults	No objection	OK	N
	Delivery-line support		Visual	No faults	No objection	OK	N
Remarks							
900	Joint 'A'-Arm 1 - Turret						
	Joint Pin/Bushes/Linkage		Visual	No cracks, wear < 0.8 mm	wear 0.52 mm	Ok	N
	Cylinder 1- Turret – Arm1		Visual	No faults	No objection	ok	N
	Pressure setting			Factory setting			
	Hydraulic lines		Visual	No faults	No objection	Ok	N
	Safety valves: piston/rod side		Visual	No faults	No objection	Ok	N
1000	Joint 'B'—Arm 1–2						
	Joint Pin/Bushes/Linkage		Visual	Cracks, wear < 0.8mm	No cracks, wear 0.62	Ok	N
	Cylinder B		Visual	No faults	No objection	Ok	N
	Speed		Visual	Depend on engine revs	Variable	Ok	N
	Pressure setting			Factory setting			
	Hydraulic lines		Visual	No faults	No objection	Ok	N
	Safety valves: piston/rod side		Visual	No faults	No objection	Ok	N
Remarks:							
1100	Joint 'C'—Arm 2 - 3						
	Forcing lever		Visual	No faults	No objection	Ok	N
	Pressure rod		Visual	No faults	No objection	Ok	N
	Joint Pin/Bushes/Linkage		Visual	Wear < 0.7mm	wear 0.52mm	Ok	N
	Cylinder C		Visual	No faults	No objection	Ok	N
	Speed		Visual	Depend on engine revs	Variable	Ok	N
	Pressure setting			Factory setting			
	Hydraulic lines		Visual	No faults	No objection	Ok	N
Safety valves: piston/rod side		Visual	No faults	No objection	Ok	N	
1200	Joint 'D'—Arm 3 - 4						
	Forcing lever		Visual	No faults	No objection	Ok	N
	Pressure rod		Visual	No faults	No objection	Ok	N
	Joint bolt		Visual	Cracks, wear < 0.60mm	wear 0.43mm	Ok	N
	Cylinder D		Visual	No leak, no cracks	No objection	Ok	N
	Speed		Visual	Depend on engine revs	Variable	Ok	N
	Pressure setting			Factory setting			
	Hydraulic lines		Visual	No leak, no damage	No objection	Ok	N
	Safety valves: piston/rod side		Visual	No faults	No objection	Ok	N
1300	Joint 'E'—Arm 4 - 5						
	Forcing lever		Visual	No faults	No objection	Ok	N
	Pressure rod		Visual	No faults	No objection	Ok	N
	Joint, Pins/Bushes/Linkages		Visual	Cracks, wear < 0.60mm	wear 0.52mm	Ok	N
	Cylinder E		Visual	No leak, no cracks	No objection	Ok	
	Speed		Visual	Depend on engine revs	Variable	Ok	
	Pressure setting			Factory setting			

	Hydraulic lines	Visual	No leak, no damage	No objection	Ok	
	Safety valves: piston/rod side	Visual	No faults	No objection	Ok	N
	Joint 'F'—Arm 5 - 6					
	Forcing lever	Visual	No faults	No objection	Ok	N
	Pressure rod	Visual	No faults	No objection	Ok	N
	Joint, Pins/Bushes/Linkages	Visual	Cracks, wear < 0.60mm	wear 0.55mm	Ok	N
	Cylinder F					
	Speed	Visual	Depend on engine revs	Variable	Ok	N
	Pressure setting		Factory setting			
	Hydraulic lines	Visual	No leak, no damage	No objection	Ok	N
1400	Concrete-delivery line					
	Fitted delivery line: DN 125 mm	Visual	Max concrete pressure 85bar	No faults	Ok	N
	End hose DN and length	Visual	5" (125mm) , length 4 m	No faults	Ok	N
	Remaining line wall thickness adequate	Visual	Min thickness 2 mm	No objection	OK	N
	Alignment of delivery line and pivot points	Visual	need to be aligned to pivot pins	No Objection	Ok	N
	Coupling safety pins	Visual	to be installed	All installed	Ok	N
	End hose safety sling/chain tighten	Visual	tightened end hose and	All installed	OK	N
	End hose connector	Visual	Safely attached to end	Safe attached	OK	N
Remarks						
1500	Hydraulics, control and hydraulic valves					
	Pressure relief valves	Visual	Factory setting	No leaks	Ok	N
	Pressure setting	Visual	Factory setting	No leaks	OK	N
	Hydraulic lines	Visual	No faults	No Objection	Ok	N
	Manual operation (switching function)		from control valve	No Objection	Ok	N
	Concrete-placing boom control block	Visual	levers returning in a neutral	No objection	OK	N
	Hydraulic pumps	Visual	No leaks	No objection	Ok	N
1600	Electrical system					
	Remote control (switching function)	Visual	to be functional	No objection	Ok	N
	Emergency-stops function	Visual,	Cut off the boom and pump movement	All works	Ok	N
	Electrical selector switch for concrete-placing boom function	Visual, check	Switch functional	In function	OK	N
	Electrical cable harnesses	Visual	cable to be harnessed	No objection	OK	N
1700	Warning and Safety signs					
	Warning signs	Visual	to be affixed and legible	Installed	OK	N
	Information signs	Visual	to be affixed and legible	Installed	OK	N
	Operational information signs	Visual	to be affixed and legible	Installed	OK	N
	Operating instructions signs	Visual	to be affixed and legible	Installed	OK	N
	Use as crane prohibited signs	Visual	to be affixed and legible	Installed	OK	N
	Rating signs	Visual	to be affixed and legible	Installed	OK	N
	High-voltage warning signs	Visual	to be affixed and legible	Installed	OK	N
2000	Machine documents					
	Instruction handbook	Visual	to be in the truck	In truck	OK	N
	Spare-parts list	Visual	to be in the office	In-office	OK	N
2001	Drive unit					
	Coupling and flange	Visual	Firm flange connection	No objection	OK	N
2200	Gear unit					
		Visual	Hydraulic motor installed	No objection	OK	N
2300	Hydraulic pumps					
		Visual	No oil leak, firmly attached	No objection	OK	N
2400	Oil tank					
		Visual	No oil leak	No objection	Ok	N
2500	Fuel system					
			No leaks, damage	No objection	Ok	N

2600	Drive shaft			No faults	No damage	Ok	N
2700	Hydraulic control						
	Pressure relief valve		Visual	Factory setting			
	Pressure setting		Visual	No faults	No objection	OK	N
	Hydraulic lines		Visual	No faults	Ok	OK	N
	Manual operation		Visual	Operation from control valve	No objection	OK	N
2800	Oil cooler		Visual	No faults	No objection	OK	N
2900	Accumulator						
	Proof of prescribed tests according to pressure vessel regulations			Installed, Factory tested	No objection	OK	N
	Pressure gauge		Visual	Pressure gauge for accumulator	No objection	OK	N
Remarks							
3100	Hydraulic motor		Visual	oil cooler, remix hopper shaft, water pump	No objection	OK	N
3200	Hydraulic line		Visual	No leak, no damage	No objection	OK	N
3400	Switch cabinet		Visual	Protected, no oil leak	No objection	OK	N
3700	S-transfer tube		Visual	shaft lubricated, gap of wear plates and cutting ring allowable	No objection	OK	N
3800	Concrete hopper						
	Concrete paddles		Visual	100mm from hopper grate	No objection	OK	N
Remarks							
4200	Water tank		Visual	Incorporated in deck	No objection	OK	N
4300	Chassis		Visual	No cracks, corrosion	No objection	OK	N
4400	Flushing water pump		Visual	Firmly attached, no oil or water leaks	No objection	OK	N
4500	Vibrator		Visual	attached to the grate	No objection	OK	N
4600	Other protective devices						
	Steps		Visual	No faults	No objection	OK	N
	Non-slip surface of steps		Visual	Non-slip surface	No objection	OK	N
	Safety rail		Visual	Safe walking on the deck	No objection	OK	N
	Hinged grill-type guard on hopper		Visual	safe fixed when is opened	No objection	OK	N
	Distance between grill bars		Visual	Max 50 mm	Visual	OK	N
	Distance between grill and crushing point		Visual	Min 100 mm	Visual	OK	N
	Hinged grill-type guard		Visual	No faults	Visual	OK	N
	Concrete paddles stopped on opening grate		Visual	Switch off valve installed to stop remixing shaft	Installed	OK	N
	Transfer tube stopped on opening of movable grill-type guard		Visual	stopped on opening of grate	It stops	OK	N
	Safeguard to prevent movable grill-type guard from falling		Visual		Installed	OK	N
	Cleaning-access closure of hopper		Visual	Access to hopper cleaning	No Objection	OK	N
	Valve-switching cylinder covered		Visual	Change over cylinder covered	In design	OK	N
	All parts with burning/ scalding hazard covered, e.g. exhaust		Visual	Protection from burning and hot surfaces	No objection	Ok	N
4700	Electrical equipment						
	Functioning of control elements		Visual	Control elements to be functional	All works	Ok	N
	Emergency-stop device		Visual	Should cut of all movement	All works	OK	N
	Temperature sensor		Visual	Oil temperature sensor	Installed	Ok	N

Notes and remarks

No notes