Operations Bulletin

JIG
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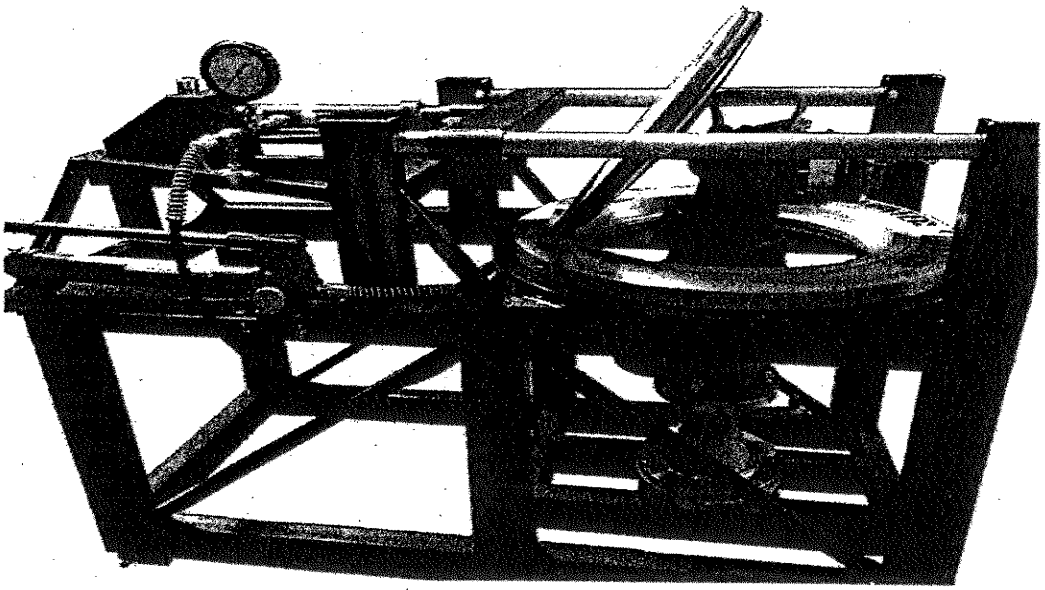
Bulletin 90 Hinged Hydrant Pit Lids May 2016

Introduction

JIG Standards (JIG 2 section 3.5.4) require that all hydrant pit covers shall be tethered or permanently connected to pits. One way of meeting this requirement is to have a hinged lid that is permanently connected to the pit. There are various designs of hinged lids available from a number of manufacturers – when open, some lay flat on the ground and others repose in a vertical or near vertical position.

A number of stakeholders have raised concerns that non-lay-flat hinged hydrant pit lids may interfere with the breakaway characteristics of EI 1584 Third Edition Hydrant Pit Couplers. The concern is that if the lid is contacted by a moving apron service vehicle then it could trap the hydrant pit coupler in a clamshell type action preventing it from breaking away cleanly as it is designed to do – continued pressure on the lid could result in a partial breakaway or pit coupler casing fracture and the potential risk of a pressurised release of fuel from the hydrant. The effect this would have on the hydrant riser pipe is not known.

The Energy Institute, who published EI 1584 Third Edition, carried out a study of this scenario which involved modelling and also some destructive testing using a specially designed test rig and two commonly used pit couplers from different manufacturers. In this particular test scenario the presence of the lid prevented both models of pit coupler from breaking away as designed. When the lid was removed the two models of pit coupler both broke away as intended.



The static load testing carried out so far demonstrates that the presence of the non-lay-flat hinged pit lid may prevent the pit coupler from breaking away as intended.

All three current manufacturers of EI 1584 Third Edition hydrant pit couplers have recommended that their equipment is not used in conjunction with non-lay-flat hinged pit lids.

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Action

It is clear that the presence of the non-lay-flat lid generates a downward force on the hydrant pit coupler that does not arise with a lay-flat lid. In the absence of further testing, including stress measurement, Hydrant Operators shall specify the lay-flat type for any new purchases of hinged hydrant pit lids.

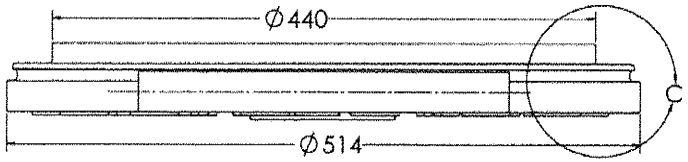
Manufacturers of non-lay-flat hinged hydrant pit lids may be able to propose a modification to the lid arrangement. Hydrant Operators shall either change existing non-lay-flat hinged hydrant pit lids to lay-flat lids or modify existing non-lay-flat hinged hydrant pit lids as recommended by the manufacturers, as soon as practical and no later than the end of December 2018. Modified lids shall continue to meet the JIG requirement of either being permanently connected or tethered to the pit. To achieve this requirement, it is recommended that equipment suppliers be contacted as soon as possible.

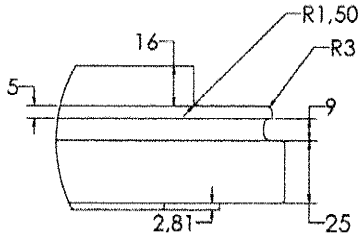
Actions to Implement this Bulletin (See Table 1 for Action Type Codes)

Action Description	Action Type	Target Completion Date
Hydrant Operators to ensure that non-lay-flat hinged pit lids are modified or replaced	JS	31st Dec 2018

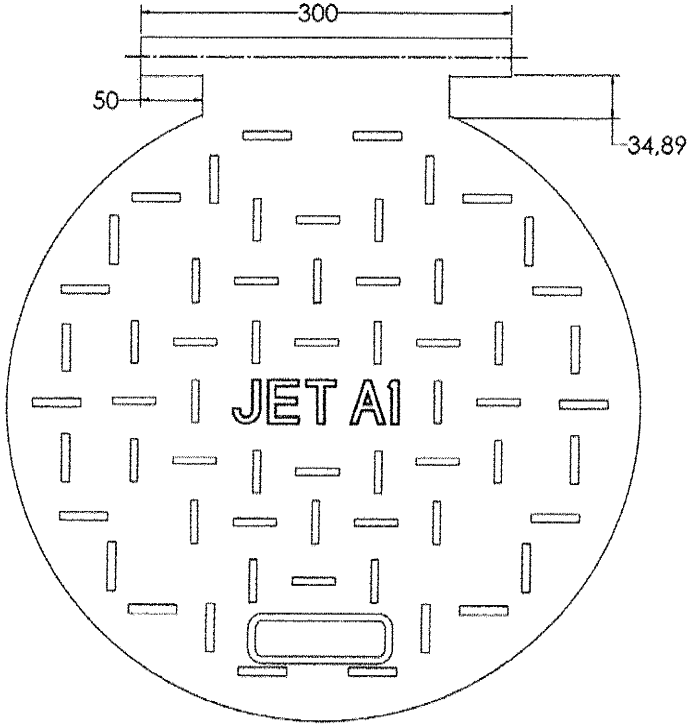
Table 1 Action Type Codes

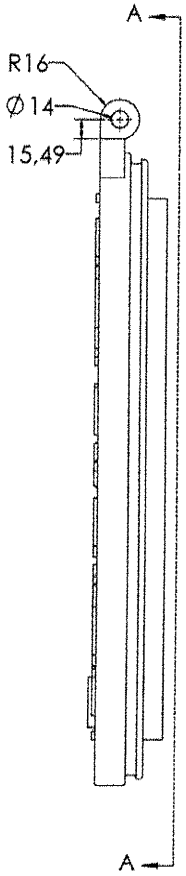
Action Types	JIG Bulletin Action Type Definition
JS	Change to JIG Standard – to be adopted by JV and/or Operator to continue to meet the JIG Standard(s) (JIG 1, 2, 4) (**).
RP	JIG Recommended Practice which the JV should consider adopting as its own practice (**).
I	Issued for information purposes only.
Note (**) - If the JV agreements require any of the JIG Standards and/or any of the JIG Common Processes as the governing operational standard then adoption of changes to applicable JIG Standards and/or Common Processes should not be considered optional by the JV Board.	

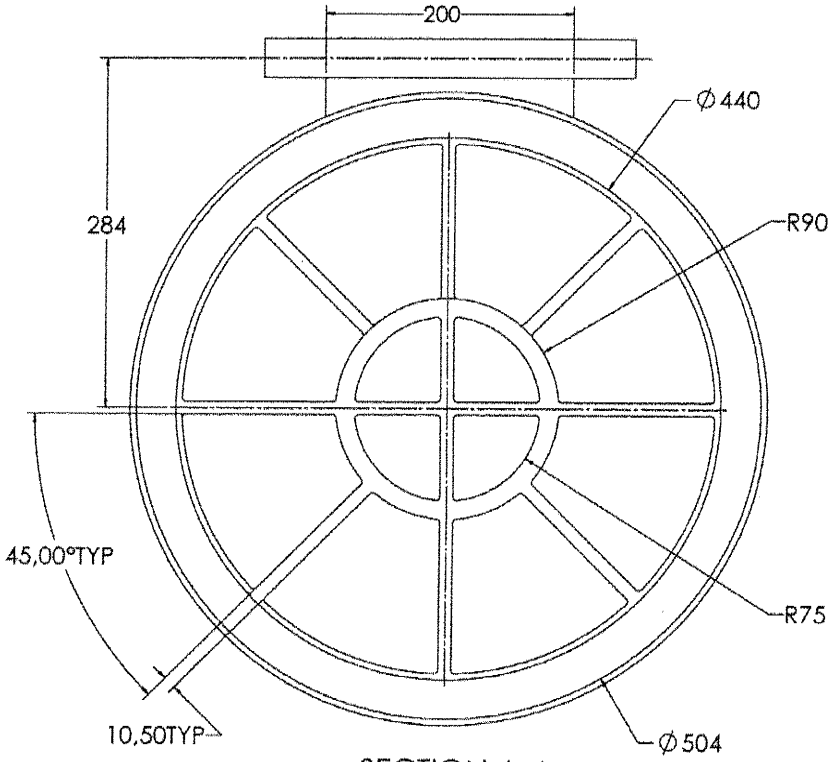




DETAIL C
SCALE 1 : 1

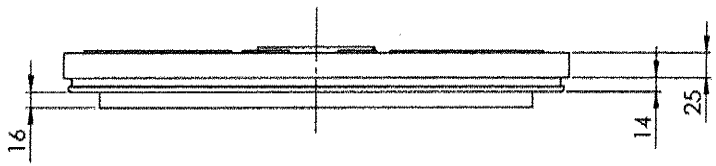


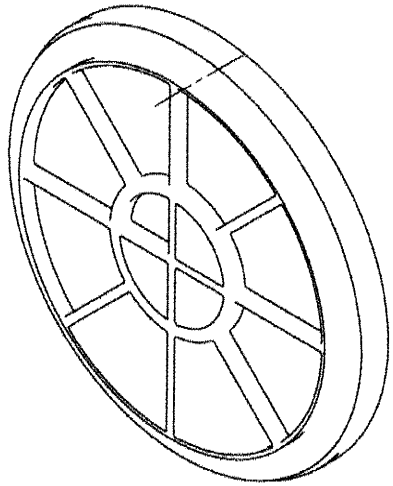


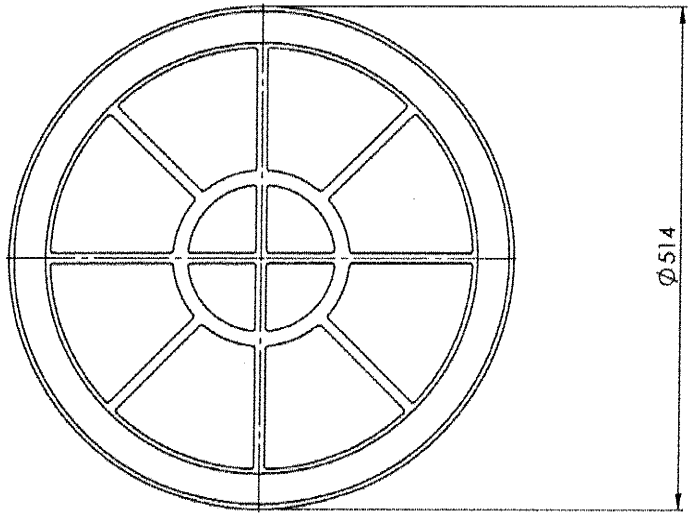


SECTION A-A

			JET A1 PIT LID
			KI-T49-DWG-001







UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: 1.6MICROMETERS TOLERANCES: LINEAR: 0.5MM DIAMETERS: 0.25MM	FINISH: ANODIZED OXIDE COATING AS PER TECHNICAL SPECIFICATION KI-T49-TSP-001			DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
	NAME	SIGNATURE	DATE		TITLE: PIT LID TYPE B	
DRAWN	TS		15-03-17			
CHKD	SKM		15-03-17			
APPVD	SKM		15-03-17			
MFG						
Q.A				MATERIAL: CAST ALUMINUM ALLOY	DWG NO. KI-T49-DWG-002	A3
				WEIGHT: 16 KG	SCALE:1:5	SHEET 1 OF 1