

**TUV INDIA PRIVATE LIMITED**  
**INSPECTION VISIT REPORT**  
IVR-050104012320/13-3-Rev.0



<b>General:</b>						
<b>TUV India Control Number:</b>		050104012320/13		<b>Branch:</b>		DELHI
<b>Notification Number:</b>				<b>Date(s) of Inspection:</b>		30/10/2020
<b>Project Name &amp; Location:</b>		Third Party Inspection at Various Location		<b>Inspection Location:</b>		Khasara No. 22/21/1, 21/2, 22/22/1, 22/2 Village Nathupur, Sonapat Haryuana - 131029
<b>TUVEPL Client Name:</b>		GE T&D India Limited,		<b>End User Name:</b>		GE T&D India Limited, (30970)
<b>DEC / PMC / EPC Name:</b> <small>(If applicable)</small>				<b>DEC / PMC / EPC Assignment Number:</b> <small>(If applicable)</small>		
<b>Vendor Name &amp; Location:</b>		ADVANCE VENTILATION (P) LTD. (32267)		<b>P.O. Number:</b> <small>(Client PO on Vendor)</small>		na Dated 01/10/2020
<b>Sub Vendor Name &amp; Location:</b> <small>(If applicable)</small>		-		<b>P.O. Number:</b> <small>(If applicable - Vendor PO on Sub Vendor)</small>		
<b>Stages Of Inspection:</b>						
<input type="checkbox"/> Kick Off / Pre Inspection Meeting		<input checked="" type="checkbox"/> Material Identification		<input checked="" type="checkbox"/> Interim Stages		
<input checked="" type="checkbox"/> Document Review		<input type="checkbox"/> Final Inspection		<input type="checkbox"/> Re-Inspection		
<b>Item Description:</b>						
P.O. Item No.	Item Code	Item Description	UOM	P.O. Quantity	Offered Quantity	Acceptable Quantity
55	NA	EXHAUST FAN WITH COWL FOR CABLE CELLER ROOM	Nos.	5	5	5
57	NA	EXHAUST FAN WITH COWL FOR BATTERY ROOM	Nos.	2	2	2
58	NA	EXHAUST FAN WITH COWL FOR AC PLANT ROOM	Nos.	1	1	1

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Tel: + 91 22 66477000, Email: [inspection@tuv-nord.com](mailto:inspection@tuv-nord.com), Website: [www.tuv-nord.com/in](http://www.tuv-nord.com/in)

Form No. : F / INSP / VR / 11 - R12; Revision Date: 14.03.2020

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Reference Documents:				
Sr. No.	Document Name	Document Number	Vendor Document Number	Approval Status
1)	QAP/ITP/QCP	N.A	5427PN087-KCH-000-SYD-SRI-S8110-QA-2001 Rev. No. N.A	Approved From GET & D
2)	Drawing(s)	NA	5427PN087-KCH-000-SYD-SRI-S8110-DS-2016 Rev.01	Reviewed by EIL on dated 18.09.2020 By Mr. A Natarajan
3)	Datasheet(s)	5427PN087-KCH-000-SYD-SRI-S8110-DS-2016	-	Reviewed by EIL on dated 18.09.2020 By Mr. A Natarajan

Inspection Activities Carried Out:				
Stages Witnessed:				
1)	Visual Inspection carried out for verification of Make, Model, Capacity, rating, Speed & to ensure Component is free from any kind of surface defect.			
2)	Photographs Attached			

Documents Reviewed:	
1)	As per QAP Clause Serial number 10 Manufacturer Test Certificate(Fan Trail Run Report) provided by manufacturer during scheduled visit reviewed with reference to Client Datasheet & Found in Order.
2)	As per QAP Clause Serial number 10 Manufacturer provided compliance report reviewed with reference to Client Datasheet & Found in Order.

Details of Equipment(s) / Instrument(s) used for measuring / testing During Inspection: (Refer Notes)							
Sr. No.	Detail of Equipment(s)/ Instrument(s)	Range	ID	Validity till Date	Calibration Certificate Number	NABL / OTHER CERT. BODIES / NABL Traceability	NON-NABL
						Please tick whichever is applicable See Note 1 & 2    See Note 3	
1)	NA	NA	NA	NA	NA	-	-

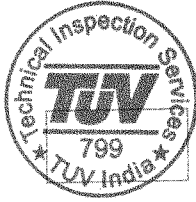
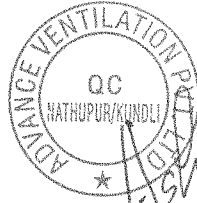
Notes:  
1) Other Certifying bodies are: NPL-India, CIPM (International Committee for Weights & Measures), ILAC & APLAC MRA Signatories.  
2) Visiting inspector to ensure continued suitability for intended use, periodic maintenance, proper identification and valid calibration records and traceability to known National / International standards of the measuring instrument(s) / testing equipment(s).  
3) Non NABL: If the calibration certificate(s) for the measuring instrument(s) / equipment(s) used during inspection do not have traceability to NABL / Other certifying bodies, then the scope of review is limited only to technical content in the calibration certificate.  
4) In lieu of table above inspectors may collect master list from manufacturer / vendor/ sub vendor with all above details clearly highlighting the details of instrument(s) / equipment(s) used during inspection.

Conclusion (Acceptable / Not Acceptable / Acceptance subject to):	
Accepted IRN can be issued for all items 56, 57, 58	
Pending activities:	
NIL	
Identification of inspected Item(s):	
TUV Soft stamp as  marked on components that were witnessed during scheduled visit. .	
Areas of Concerns:	
NIL	
Non Conformities raised / Discrepancies observed during inspection (If Any, Mention TUV India HCR Number):	
NIL	
Attachments:	
<input checked="" type="checkbox"/> Inspection records – Total Page Nos.    2 pages	<input checked="" type="checkbox"/> Master List of calibrated Instruments / equipment :    Not Applicable

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<input checked="" type="checkbox"/> Inspection Photos – Refer Page Nos.    2 pages	<input checked="" type="checkbox"/> Others (Specify) :    All Supporting Doc.
<b>Authorised Signature:</b>	
<b>TUV India representative:</b>	<b>Vendor / Sub Vendor Representative (If Applicable):</b>
 <i>Rakesh Mishra</i> 30/10/2020	 <i>[Signature]</i>
<b>Name:</b> Rakesh Mishra <b>Date:</b> 30/10/2020	<b>Name:</b>
<b>Distribution List:</b> <input checked="" type="checkbox"/> TUVI Client / End User <input checked="" type="checkbox"/> TUVI Executing Branch / TUV Originating Branch <input checked="" type="checkbox"/> Vendor / Sub Vendor	
<b>Revision Number (If Applicable):</b> 1 –	
<b>This Document Supersedes IVR No. :-</b>	

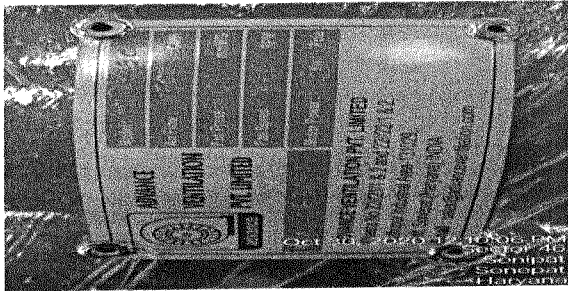
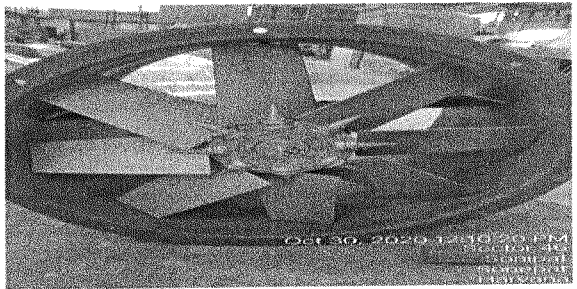
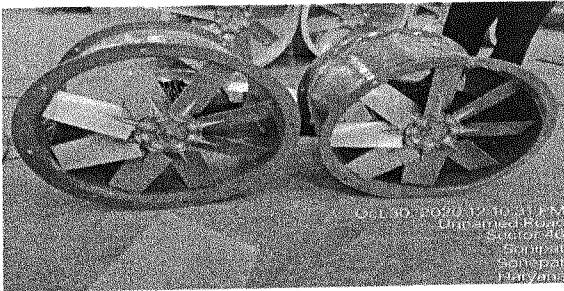
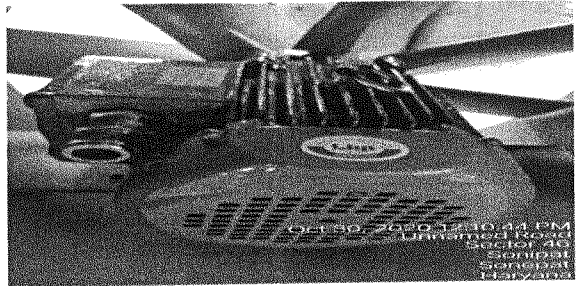
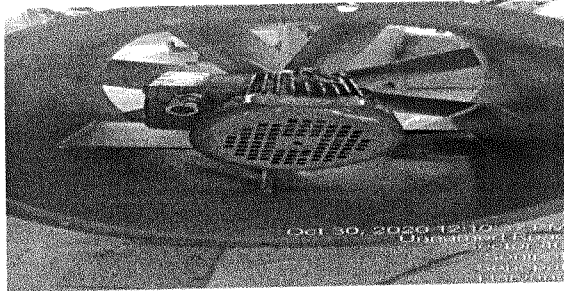
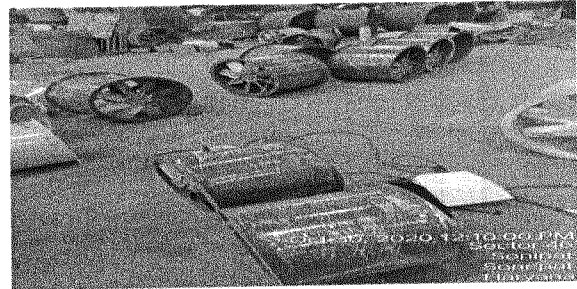
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Inspection Pictures	
Make Model Verification	Visual Verification
	
Visual Verification	Visual Verification
	
Visual Verification	Quantity Verification
	

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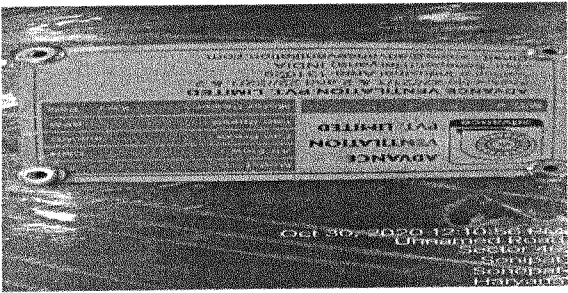
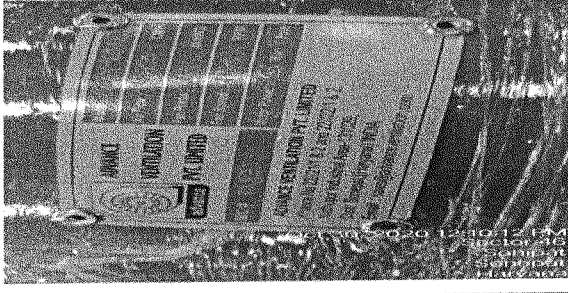
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Inspection Pictures	
Make, Model Verification	Make, Model Verification
	

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## INSPECTION OFFER LETTER

Our ref no: M20/DEL-067/GE/OCT-01

Date : 24.10.2020

**Main client:** BPCL-BHARAT PETROLEUM CORPORATION LIMITED.

**Purchaser :** GE & TD INDIA LTD.

**Project:** 220/33 KV GIS Package for BPCL,KOCHI

**QAP NO-** 5427PN087-KCH-000-SYD-SRI-S8110-QA-2001 REV-02.

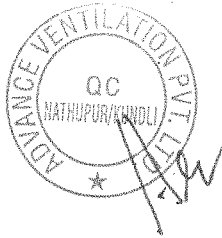
**MAIN Contractor-**Advance Ventilation Private Limited, Nathupur, Sonapat.

**Job no:**M20/DEL-067.GE

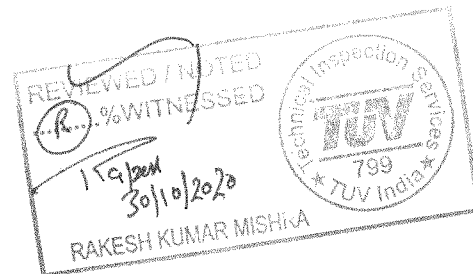
**WORKS:** : M/s Advance Ventilation pvt ltd  
Khasara No.- 22//21/1, 21/2, 22//22/1, 22/2,  
Village-Nathupur, Sonapat, Haryana-131029

**P.O. NO:** 5427- 4501043550, Dated 19.08.2019

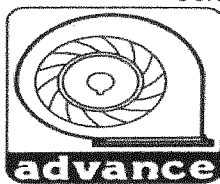
BBU Sl. No	Equipment name	Model NO.	Po QTY/ OFFERED QTY (Nos.)	REMARKS
56	EXHAUST FAN WITH COWL FOR CABLE CELLAR ROOM	AdTV-550/8B with 0.75 kw/4pole motor.	5/5	
57	EXHAUST FAN WITH COWL FOR BATTERY ROOM	AdPV450/8B with 0.55 kw/4pole FLP motor.	2/2	
58	EXHAUST FAN WITH COWL FOR AC PLANT ROOM	AdTV-550/8B with 0.75 kw/4pole motor.	1/1	



For ADVANCE VENTILATION PVT. LTD.



Date: 24.10.2020  
Certificate no: M20/DEL-067.GE/01



**Certificate of Conformance**

**PROJECT : 220/33 KV GIS PACKAGE FOR BPCLAT KOCHI REFINERY, KERLA.**

**OWNER : BPCL, KOCHI**

**PMC : ENGINEERS INDIA LIMITED**

**Contractor: GE & TD INDIA LTD.**

**Vendor : Advance Ventilation Pvt. Ltd, Delhi/Nathupur, Sonapat**

**Purchase Order no- 5427-4501043550 dated 19.08.2019**

**ITEM: Exhaust fan for Cable Cellar, battery room & AC Plant Room (BBU SR. NO-56,57, 58)**

**Model no: AdTV-550/8B with motor rating 0.75 kw/4pole -6 nos.  
AdPV-450/8B with motor rating 0.55 kw/4pole-FLP -2 nos.**

**Manufacturer: Advance Ventilation Pvt. Limited, Nathupur**

**Reference QAP NO & QAP clause no- 5427PN087-KCH-000-SYD-SRI-S81KM3A-2001 REV-02 & SL.NO-10.**

**We certify that the above mentioned Exhaust fan for Cable Cellar, battery room & AC Plant Room supplied against P.O. NO- 5427-4501043550 dated 19.08.2019**

**Reference Data sheet no- 5427PN087-KCH-000-SYD-SRI-S8110-DS-2016 REV-03.**

**We confirm that the Exhaust fan for Cable Cellar, battery room & AC Plant Room is in compliance with above mentioned documents.**

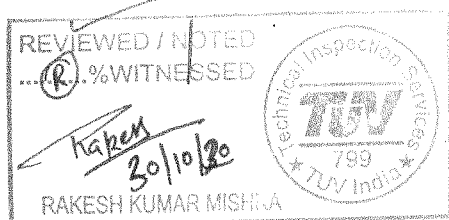
**We hereby confirmed that qty"1 no" as specified assure that constitute the qty req as per project req.**

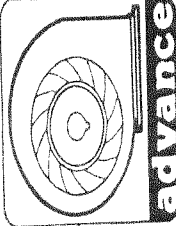
**If any addition/deletion require, same shall be ensure by AVPL without any price & time implication.**

**We hereby guarantee for these Exhaust fan for Cable Cellar, battery room & AC Plant Room to be without any material/manufacturing defects.**

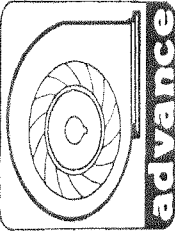
**If any defect is observed during the guarantee period, the defective Exhaust fan for Cable Cellar, battery room & AC Plant Room part will rectified/repared on free of charge basis.**

**For Advance Ventilation Pvt. Ltd,**



		<b>FAN TRIAL RUN REPORT</b> Reference Centrifugal air fan: IS 4894 Standard: Axial flow air fan: IS 3588										<b>ADVANCE VENTILATION PVT. LIMITED</b> (NATHURPUR-131029/Haryana)					
		Customer				GE T&D INDIA LTD				BPCL KOCHI REFINERY				Job No.		M20/DEL-67	
		Description / Area				Exhaust Air Fan				AdTV-450/8B				Date		October 24, 2020	
Motor Detail		Make		Rating / HP		KW		Speed; RPM		Voltage Volts		Current Amps.		Power Factor		Frame Size:	
LHP				0.55kw/4p/FLP				1420		415		1.3		0.75		80	
										CMH		4500		Pressure		10	
																MMWG	
OBSERVATION																	
Fan Serial		Motor Serial		Fan Speed RPM		R		Y		B		V		H		A	
10836		1000878005		1430		0.6		0.7		0.8		1.6		2.2		1.9	
10837		1000878004		1435		0.8		0.7		0.6		1.9		2.1		1.8	
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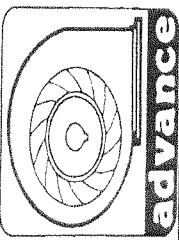
		<b>FAN TRIAL RUN REPORT</b> Reference Centrifugal air fan: IS 4894 Standard: Axial flow air fan: IS 3588										<b>ADVANCE VENTILATION PVT. LIMITED</b> (NATHURPUR-131029, Haryana)							
		Customer		GE T&D INDIA LTD		BPCL KOCHI REFINERY		Job No.		M20/DEL-67									
		Description / Area		Exhaust Air Fan															
		Fan Model		AdTV-550/8B				Date		October 24, 2020									
Motor Detail																			
Make		Rating KW / HP		Speed; RPM		Voltage Volts		Current Amps.		Power Factor		Frame Size:							
Marathon		0.75kw/4pole		1446		415		1.64		0.77		80							
						CMH		9000		Pressure		10		MMWG					
OBSERVATION																			
Fan Serial		Motor Serial		Fan Speed RPM		Current, Amps		Vibration ,mm/sec		Initial Temp		Final Temp		Sound Db(A)		Remarks			
10830		20E36368T-0041		1450		R 0.9 Y 0.9 B 0.9 V 1.9		2.2		2.1		26		28.7		2.7 83.4		OK	

REVIEWED / NOTED  
 P. %  
 Rakesh Mishra  
 30/10/2020  
 RAKESH KUMAR MISHRA  
 Technical Inspection Services  
 799  
 \*TUV India\*

QC  
 ADVANCE VENTILATION PVT. LTD.  
 NATHURPUR-KUNDLI

Designation

Name

		<b>FAN TRIAL RUN REPORT</b> Reference Centrifugal air fan: IS 4894 Standard: Axial flow air fan: IS 3588										<b>ADVANCE VENTILATION PVT. LIMITED</b> (NATHURPUR-131025 Haryana)			
		Customer		GE T&D INDIA LTD		BPCL KOCHI REFINERY		Job No.		M20/DEL-67					
		Description / Area		Exhaust Air Fan											
		Fan Model		AdTV-550/8B				Date		October 24, 2020					
Motor Detail															
Make		Rating / HP		KW		Speed; RPM		Voltage Volts		Current Amps.		Power Factor		Frame Size:	
Marathon		0.75kw/4pole				1446		415		1.64		0.77		80	
								CMH		10800		Pressure		10	
														MMWG	
OBSERVATION															
Fan Serial	Motor Serial	Fan Speed RPM	R	Y	B	V	H	A	Initial Temp	Final Temp	Temp Rise	Sound Db(A)	Remarks		
10831	20E36368T-0043	1455	0.8	0.8	0.8	1.6	2.2	1.9	26	28.7	2.7	83.6	OK		
10832	20E36368T-0041/1	1455	0.9	0.8	0.9	1.9	2.1	1.8	26	28.4	2.4	84.7	OK		
10833	20E36368T-0039	1456	0.7	0.8	0.8	1.9	2.2	2.1	26	28.7	2.7	83.4	OK		
10834	20E36368T-0039/1	1455	0.9	0.9	0.8	1.6	2.2	1.9	26	28.7	2.7	83.6	OK		
10835	20E36368T-0046	1450	0.8	0.7	0.9	1.9	2.1	1.8	26	28.4	2.4	84.7	OK		

REVIEWED / NOTED  
 (R) % WITNESSED  
 T. K. Mishra  
 30/10/2020  
 RAKESH KUMAR MISHRA

ADVANCE VENTILATION PVT. LTD.  
 NATHURPUR-KUNDLI  
 HARYANA

Name  
 Designation

Annexure - B" Dated- 30/10/2020

28.00	STEAM PIPE-100 MM DIA	15.00	RMT	3,100.00	46,500.00
29.00	28000 CFM AIR HANDLING UNIT (AHU)	3.00	Nos.	1,480,000.00	4,440,000.00
30.00	HEATER 34KW FOR GIS HALL	1.00	Nos.	75,000.00	75,000.00
31.00	HEATER 35KW FOR GIS HALL	1.00	Nos.	75,000.00	75,000.00
32.00	VOLUME CONTROL DAMPER GIS HALL	1.00	Set	220,000.00	220,000.00
33.00	VOLUME CONTROL DAMPER FOR SWGR HALL	1.00	Set	275,000.00	275,000.00
34.00	MOTORISED FIRE DAMPER FOR GIS HALL	1.00	Set	450,000.00	450,000.00
35.00	MOTORISED FIRE DAMPER FOR SWGR HALL	1.00	Set	450,000.00	450,000.00
36.00	GRILL & DIFFUSER GIS S/S HALL	1.00	Set	108,550.00	108,550.00
37.00	GRILL & DIFFUSER SWGR HALL	1.00	Set	305,900.00	305,900.00
38.00	DUCTING (SHEET THICKNESS 24G)	415.00	Sq.Mt.	1,550.00	643,250.00
39.00	DUCTING (SHEET THICKNESS 22G)	727.00	Sq.Mt.	1,750.00	1,272,250.00
40.00	DUCTING (SHEET THICKNESS 20G)	345.00	Sq.Mt.	1,850.00	638,250.00
41.00	DUCTING (SHEET THICKNESS 18G)	93.00	Sq.Mt.	2,100.00	195,300.00
42.00	LOUVER FOR CABLE CELLAR	1.00	SET	120,000.00	120,000.00
43.00	LOUVER FOR BATTERY ROOM	1.00	SET	37,000.00	37,000.00
44.00	LOUVER FOR AC PLANT ROOM	1.00	SET	32,000.00	32,000.00
45.00	THERMAL INSULATION	1,420.00	Sq.Mt.	4,650.00	6,603,000.00
46.00	ACOUSTIC INSULATION	160.00	Sq.Mt.	4,850.00	776,000.00
47.00	CHILLED WATER PIPE INSULATION	95.00	Sq.Mt.	4,250.00	403,750.00
48.00	STEAM LINE INSULATION	18.00	Sq.Mt.	4,850.00	87,300.00
49.00	4500 CFM CHEMICAL FILTER UNIT	2.00	Nos.	900,000.00	1,800,000.00
50.00	9000 CFM CENTRIFUGAL FAN	2.00	Nos.	50,000.00	100,000.00
51.00	5000 CFM CHEMICAL FILTER UNIT	2.00	Nos.	1,000,000.00	2,000,000.00
52.00	10000 CFM CENTRIFUGAL FAN	2.00	Nos.	50,000.00	100,000.00
53.00	1M3 CHILLED WATER EXPANSION TANK	1.00	Nos.	65,000.00	65,000.00
54.00	1M3 CONDENSATE STORAGE TANK	1.00	Nos.	65,000.00	65,000.00
55.00	PROPELLER AIR FAN FOR TOILET	2.00	Nos.	5,000.00	10,000.00
56.00	EXHAUST FAN WITH COWL FOR CABLE CELLAR ROOM	5.00	Nos.	85,000.00	425,000.00
57.00	EXHAUST FAN WITH COWL FOR BATTERY ROOM	2.00	Nos.	55,000.00	110,000.00
58.00	EXHAUST FAN WITH COWL FOR AC PLANT ROOM	1.00	Nos.	55,000.00	55,000.00
59.00	ELECTRICAL PANELS & ACCESSORIES	1.00	Nos.	900,000.00	900,000.00
60.00	MOTOR FOR AIR HANDLING UNIT (AHU)	3.00	Nos.	40,000.00	120,000.00
61.00	1CMH DESUPERHEATING PUMP WITH MOTOR	2.00	Nos.	75,000.00	150,000.00
TOTAL					34,500,000.00

FOR GET&D

Anju Bharti

Anju Bharti

REVIEWED/NOTED  
.....  
NOT WITNESSED

30/10/2020  
RAKESH KUNDA

Offered Item No. 56, 57, 58

8 Total qty. 8 Nos.

Exhaust fan with cowl

\* For Cable Cellar Room - 5 Nos  
\* For Battery Room - 2 Nos  
\* " AC Plant Room - 1 Nos



**220/33 KV GIS PACKAGE FOR BPCL AT KOCHI REFINERY, AMBALAMUGAL, KERALA**

**COMMENT RESOLUTION SHEET**

Doc No:	5427PN087-KCH-000-SYD-SRI-S8110-DS-2016			
Doc Title:	Technical Datasheet of Exhaust Fans			
Item N°	Document No., Rev,	Observation	GE reply	Response (Open or Closed)
1	5427PN087-KCH-000-SYD-SRI-S8110-DS-2016;Rev-1	Mismatch Model number of exhaust fan in data sheet and GA drawing for battery room (Refer page- 5 of 13 & 9 of 13) also check drive type - (Direct/belt)	There is typoerror in data sheet so we considerd model no Adpy-450/8B with direct driven in battery room as per GA drawing approved.	
Commented by:		Responded by:		Approved by:
BPCL/EIL		GET & D		BPCL/EIL

## DOCUMENT REVIEW DETAILS

- |   |              |   |
|---|--------------|---|
| 1 | No Comments. | <p><b>Doc. 5427PN087-KCH-000</b></p> <p>Proceed with manufacture / fabrication as per the commented document. Revised document required.</p> <p>Document does not conform to basic requirements as marked. Resubmit for review.</p> |
| 2 |              |   |
| 3 |              |   |

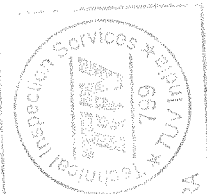
<input checked="" type="checkbox"/> R	Retained for Records.	<input type="checkbox"/> V	Void.
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Signature with Date **18-SEP-2020**

Name of Reviewer: **ANATAPALIAN(A576)**

Page No. 1 of 18

REVIEWED / NOTED  
1 % WITNESSED



RAKESH KUMAR MISRA

Noted

# Technical Data Sheet & GA Drawing for Exhaust Axial Fan



## DOCUMENT REVIEW DETAILS

- ☐ 1 No Comments. **Doc. 5427PN067-KCH-000-SYD-SRI-88110-DS-2016 Rev. R3**
- ☐ 2 Proceed with manufacture / fabrication as per the commented document. Revised document required.
- ☐ 3 Document does not conform to basic requirements as marked. Resubmit for review.
- ☒ R Retained for Records. ☐ V Void.

Signature with Date **18-SEP-2020**

Name of Reviewer **A NATARAJAN(A576)**

Page No. **3 of 13**

# TECHNICAL DATA SHEET & GA DRAWING FOR AXIAL FLOW EXHAUST FANS

Sr. No.	Description	Unit	Particulars
1	Manufacturer		AVPL
2	FAN Model No.		AdpV-450/8B
3	Type of Fan		Tube Axial Fan
4	User Space		Battery Room
5	Capacity	CMH	4500 ✓
6	Quantity		1 Working + 1 Stand by ✓
7	Static pressure	mmWC	10 ✓
8	Impeller Diameter	mm	450
9	Type of blade		Fixed/variable pitch Cast Aluminium blade
10	No. of blade	Nos.	8
11	Blade angle	Degree	25
12	Drive		Direct Driven
14	Fan/Impeller Speed	RPM	1440 ✓
15	Shaft Power	BkW	0.20
16	Voltage	V	415 ± -6%
17	Bearing Type		Ball Bearing
18	Selection curves enclosed (yes/No)		yes
19	Motor Data		
	a) Rating	kW/Pole	0.55/4 (FLP)
	b) Speed	RPM	1440
20	Material of Construction		Casing - CS, Impeller-Cast Aluminum, Shaft-EN8 (This is motor shaft only, The impeller is mounted on the motor shaft)
21	Accessories		Rain protection cowl, birdmesh
22	Painting		Dark grey
23	Noise Level	dB(A)	≤ 85 dBA, 1.5 mt distance from the source.
24	Weight of Fan + Motor (Dynamic)	KG	

R-

R-



## DOCUMENT REVIEW DETAILS

1. No Comments.
2. Proceed with manufacturing & installation as per the commented document. Revised document required.
3. Document does not conform to basic requirements as marked. Resubmit for review.
4. Retained for Records. ☒ Void.

Signature with Date 18-SEP-2020

Name of Reviewer A NATHAN (A576)

Page No. 5 of 13

REVIEWED / NOTED

Noted

30/10/2020

RAKESH KUMAR MISHRA

90

# TECHNICAL DATA SHEET & GA DRAWING FOR AXIAL FLOW EXHAUST FANS

Sr. No.	Description	Unit	Particulars
1	Manufacturer		AVPL
2	FAN Model No.		AdTV-550/8B
3	Type of Fan		Tube Axial Fan
4	User Space		Cable Cellar
5	Capacity	CMH	10800
6	Quantity		5 Working
7	Static pressure	mmWC	10
8	Impeller Diameter	mm	550
9	Type of blade		Fixed/variable pitch Cast Aluminium blade
10	No. of blade	Nos.	8
11	Blade angle	Degree	27.5
12	Drive		Direct Driven
13	Fan/Impeller Speed	RPM	1440
14	Shaft Power	BkW	0.65
16	Voltage	V	415 $\pm$ -6%
17	Bearing Type		Ball Bearing
18	Selection curves enclosed (yes/No)		yes
19	Motor Data		
	a) Rating	kW/Pole	0.75/4P
	b) Speed	RPM	1440
20	Material of Construction		Casing - CS, Impeller-Cast Aluminum, Shaft-EN8(This is motor shaft only, The impeller is mounted on the motor shaft)
21	Accessories		Rain protection cowl, birdmesh
22	Painting		Dark grey
23	Noise Level	dB(A)	$\leq$ 85 dBA, 1.5 mt distance from the source.
24	Weight of Fan + Motor (Dynamic)	KG	120
25	Testing		As per approved QAP



## DOCUMENT REVIEW DETAILS

- No Comments.
- Proceed with manufacture / fabrication as per the comment on document. If required document required.
- Document does not conform to basic requirements as marked. Resubmit for review.

Retained in Records. ☒ Void.

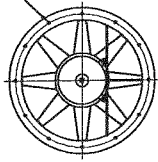
Signature with Date: 16 SEP 2020

Name of Reviewer: ANATARA KNA570

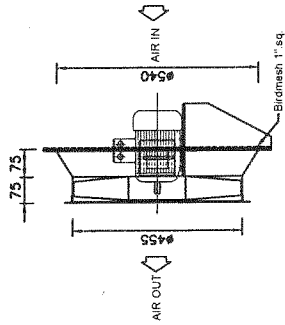
Page No.: 7 of 18

REVIEWED / NOTED  
Noted  
16/09/2020  
RAKESH KUMAR

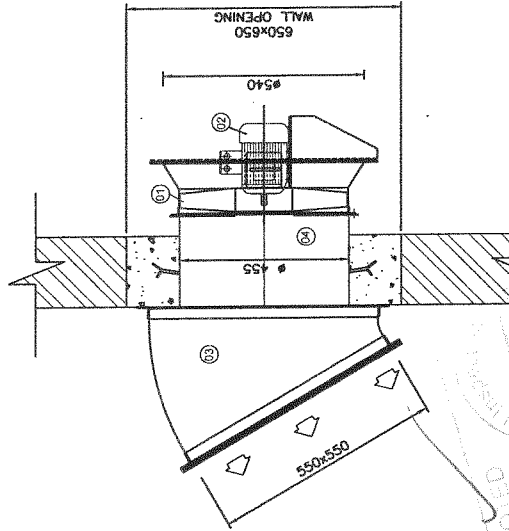
# GA drawing of Exhaust Air Fan



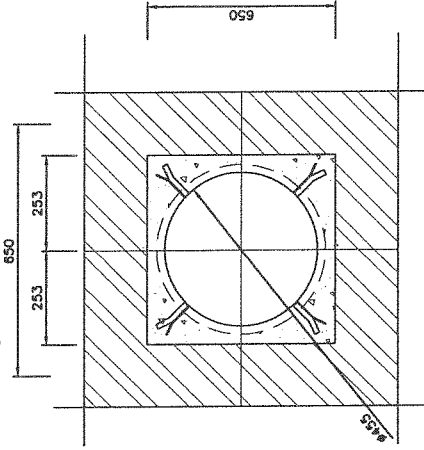
IMPELLER END VIEW



FAN SIDE VIEW



FAN ASSY. DETAIL



FAN SLEEVE GROUTING DETAIL

FOR APPROVAL

- NOTES:
1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN METERS.
  2. EXHAUST AIR FAN ASSEMBLY SUPPORTED/POUNDED ON THE ANGLE FRAME OR FAN MOUNTING SLEEVE.
  3. ITEM LISTED FOR ONE FAN ONLY.
  4. QTY. OF FAN SHALL BE AS PER APPROVED LAYOUT.
  5. FAN MOUNTING SLEEVE GROUTING SHALL BE DONE BY APL.

Fan Model: AdpV-450

PART NO.	DESCRIPTION	SIZE	QTY.	MATLS MAKE
04.	FAN INLET BIRD MESH	Ø 455	2	GSS
03.	COWL WITH BIRD MESH	550x550	2	GSS
02.	MOTOR 0.55 KW/POLE	-	2	MARATHAN
01.	SUPPLY AIR FAN	AdpV 450/8B	2	AVPL

REV	DATE	DESCRIPTION	BY	CHKD	APPROV
1	10.09.2018	FOR APPROVAL	S.S.	S.S.	MA
2	21.11.2018	SUBMISSION FOR APPROVAL	D.S.	S.S.	MA
3	18.08.2018	SUBMISSION FOR APPROVAL	D.S.	S.S.	MA

8POL BHARTI PETROLEUM CORPORATION LIMITED

GETAD INDIA LTD  
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

U.S. & PLOT NO. 14, HYPER MARIYOWN SECTOR 12B

ENGINEERS INDIA LIMITED

220 KV GIS SUBSTATION AT KOCHI

GA DRAWING OF EXHAUST FAN

SCALE: 1:100

DATE: 18/09/2018

PROJECT: KOCI REFINERY AMBALAMUGAL KERALA, INDIA

OWNER'S REPRESENTATIVE: ENGINEERS INDIA LIMITED

NAME OF SUBSTATION: 220 KV GIS SUBSTATION AT KOCHI

TITLE: GA DRAWING OF EXHAUST FAN

DOCUMENT REVIEW	DETAILS	LOCATION	Air Capacity (CMH)	S.P. (mmWC)	Fan Model	Fan Speed (RPM)	Qty. (Nos.)	Motor Kw/Pole	Fan Dynamic Load including motor wt.(Kg.)
1	Doc: 84271907-1024005-97D-381-8811006-2018	BATTERY ROOM	4,500	10	AdpV-450/8B	1440	1W+1S	0.55/4 FLP	85

12-Holes Ø 11.5 at 488 pcd

550x550

650x650 WALL OPENING

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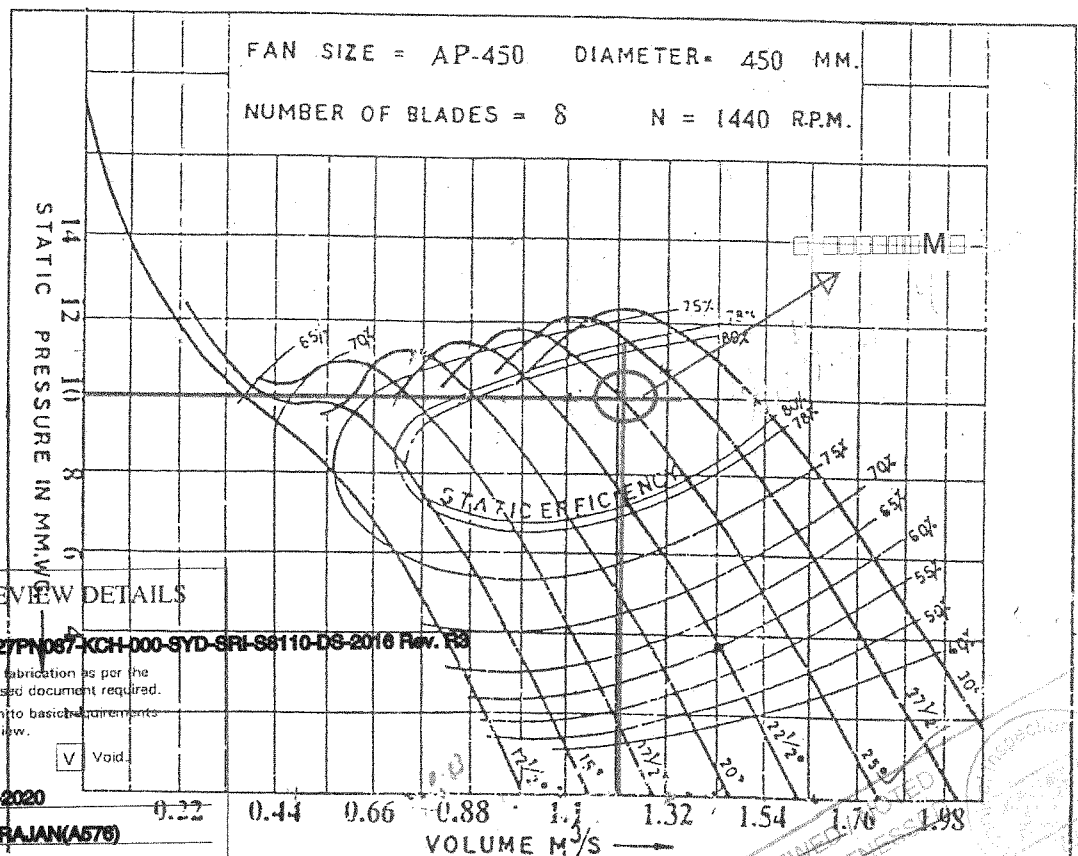
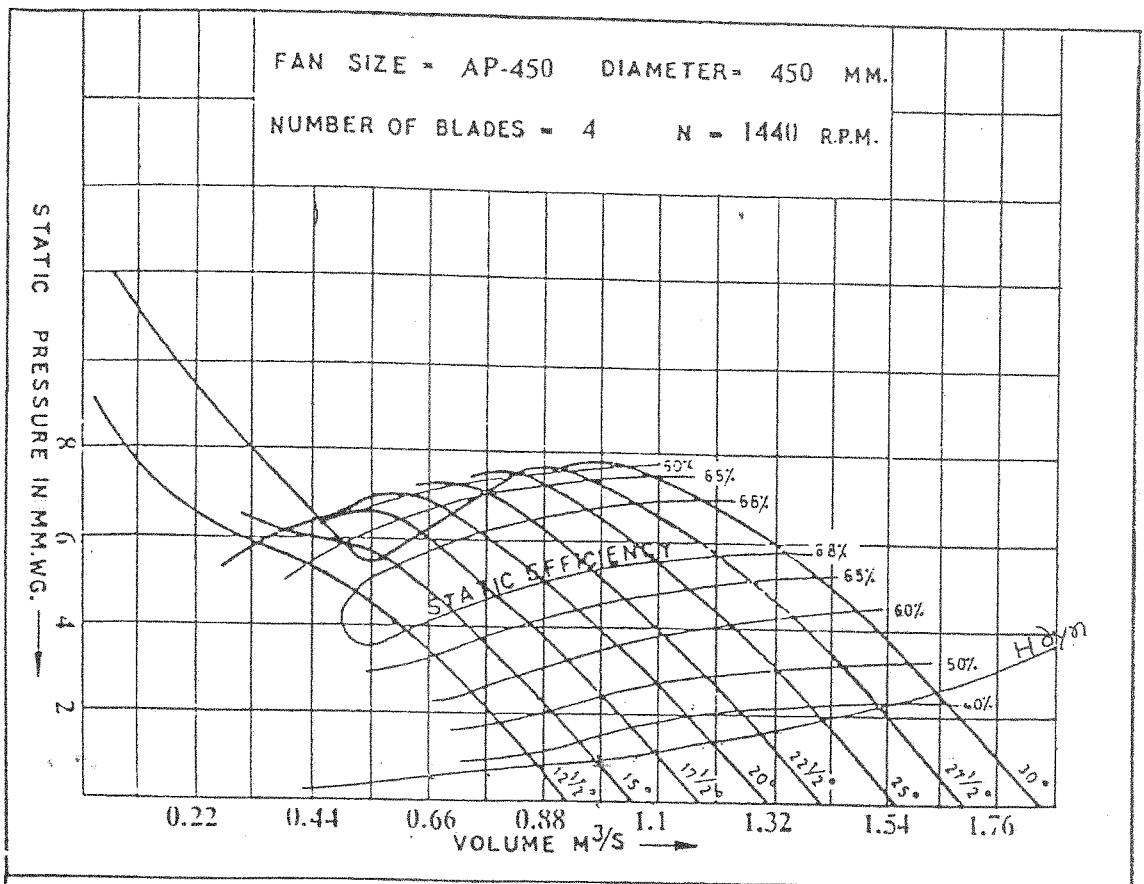
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DOCUMENT REVIEW DETAILS

- 1 No Comments. Doc. 6427/PN087/KCH-000-SYD-SPI-S8110-DS-2016 Rev. R3
- 2 Proceed with manufacture / fabrication as per the commented document. Revised document required.
- 3 Document does not conform to basic requirements as marked. Resubmit for review.
- R Retained for Records. V Void.

Signature with Date 18-SEP-2020

Name of Reviewer A NATARAJAN(A576)

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