

CV MITRA HASANAH TEKNIK

Report Title : Assessment of Instrument Device 2022

Continued

End User Name PT INDO BARAT RAYON	Location <i>CIKAMPEK</i>
Tag no. FT5038	Description <i>Main air to RF burner</i>
Manufacturer <i>HONEYWELL</i>	Device <i>Flow Transmitter DP Cell Type</i>
Reference <i>Data sheet, Calibration report</i>	ACCEPTED / NOT ACCEPTED

Method

Method of assessment is mentioned here below;

- Visit site for inspection equipment.
- Check and verify equipment specification
- Review equipment performance through operation report

Activities/ Observation;

- Range value implemented in DCS and Transmitter both are deviated from Data sheet.
- Transmitter has been calibrated out of procedural, it was performed in linear mode instead of Square root mode.

Recommendation.

- To raise MOC
- To create proper calibration procedure.
- To perform transmitter calibration.
- To rectify discrepancy Range between transmitter and DCS.

The similar problems occurs in several other flow transmitters as outlined in the attachment

Attachment:

- FE5038 Orifice data sheet
- FT5038 Transmitter data sheet
- FT5038 Calibration report
- List of transmitter with similar issue

<https://www.jasaservis.net/IBR FT5038.pdf>

Assessor: Mohamad yani/ Riswanto Date: 7-4-2022

Customer Comment



Delta Hudson Engineering Ltd.

a McDermott company

DIFFERENTIAL PRESSURE TRANSMITTERS

SHEET 2 OF 2

DATA SHT.
DP012/02

REV.
2

CONTRACT
28810

DATE
97.09.19

CLIENT AKZO NOBEL

LOCATION CIKAMPEK

MANUFACTURER ROSEMOUNT

VENDOR

No.	BY	DATE	REVISION
A0	BD	97.07.16	Approval and RFQ
0	BD	97.08.14	Purchase

1 JG 97.09.11 Add & Revise Tags

2 JG 97.09.19 Revise Model No.

R.F.Q. - P.O.

C-32-040

BY

BD

CHK'D.

BSD

APPR.

REV	TAG NUMBER	MFD	LINE No. / EQUIP. No.	SERVICE	ADJ. RANGE (kPa)	SET RANGE (kPa)	PRESSURE OPER. / MAX. (kPa-g)	TEMP. OPER. / MAX. (°C)	NOTES
	500FT-5038H	MF102	14"-CA-132-1"IH	F-500 MAIN AIR TO R.	2.4/37.3	0-12.50	0.68BARG	107	ALL
				F. BURNER		8			
	500FT-5038L	MF102	14"-CA-132-1"IH	F-500 MAIN AIR TO R.	0.5/7.4	0-7.1	0.68BARG	107	ALL
				F. BURNER		8			
	500FT-5041	MF102	6"-CA-136-1"IH	F-500 TRIM AIR TO R.	2.4/37.3	0-12.50	0.68BARG	107	ALL
				F. BURNER		3.6			
	500FT-5043	MF102	10"-CA-133-1"IH	K-503 BLOWER AIR VEN	2.4/37.3	0-25.00	0.68BARG	107	ALL
				T		15			
	500FT-5044	MF102	10"-CA-132-1"IH	K-504 BLOWER AIR VEN	2.4/37.3	0-25.00	0.68BARG	107	ALL
				T		15			
	500FT-5050H	MF103A	2"-FG-241	F-500 FUEL GAS TO R.	2.4/37.3	0-12.50	2.2BARG	30	ALL
				F. BURNER		7			
	500FT-5050L	MF103A	2"-FG-241	F-500 FUEL GAS TO R.	0.5/7.4	0-7.1	2.2BARG	30	ALL
				F. BURNER		7			
	500FT-5078	MF103B	4"-MS-180-2"IH	F-500 STEAM TO R.F.	12.4/186	0-50.00	4.2BARG	153	ALL
				BURNER					
	500FT-5090	MF104	2"-BFW-271	V-506 BFW TO STEAM D	2.4/37.3	0-25.00	40 BARG	130	ALL
				RUM		15			

Data sheet for

FLOW ELEMENT

AKZO NOBEL

DELTA HUDSON ENGINEERING

SATINDO

NO

BY

DATE

SHEET: 2

OF 11

SPEC#: KC093/01

REV: 1

JOB #: 28810

P. O. : 28810C-32-130

DATE : 6/6/97

CHK: BSD

BY : DK

APR:

0

DK

6/6/97

1

BSD

8/8/97

ELEMENT

DATA

1. DEVICE : Orifice Plate-Standard
2. STANDARD : ASME MFC-3M
3. BORE : 7.6250 in
4. MATERIAL : 316 SST
5. RING MATERIAL
6. RING TYPE
7. MANUFACTURER : BARBER ENGINEERING
8. MODEL NUMBER : CAT 520

ELEMENT

FLANGES

9. TAPS : Upstream
10. TAP SIZE : 0.0000
11. TAP TYPE : Flange
12. MATERIAL : Carbon Steel
13. FLANGES INCLUDED : No
14. FLANGE RATING : 300#
15. FLANGE TYPE

FLUID DATA

16. TAG NUMBER : 500-FE-5038
17. SERVICE : F-500 MAIN AIR TO R.F. BURNER
18. LINE NUMBER : 14"-CA-132-1"1H
19. FLUID : Air
20. FLUID STATE : Gas
21. MAXIMUM FLOW : 10690.86 Sm3/hr
22. NORMAL FLOW : 8051.81 Sm3/hr
23. PRESSURE : 0.68 Bar-g
24. TEMPERATURE : 107.00 DEG C
25. DENSITY (base) : 1.21 kg/m3
26. DENSITY (oper) : 1.51 kg/m3
27. Z-COMPRESSIBILITY
28. k-FACTOR (Cp/Cv) : 1.3960
29. VISCOSITY : 0.02 cP
30. VAPOR QUALITY
31. BASE PRESSURE : 1.01 Bar
32. BASE TEMPERATURE : 15.00 DEG C
33. ATMOSPHERIC PRESSURE : 1.00 Bar

METER

34. TYPE OF METER : DP XMTR
35. DIFF RANGE : 0.13
36. CHART/SCALE : 10690 BAR
37. CHART MULT. : 1.00008 Linear

ELEMENT AND

FLANGE

38. BETA=d/D : 0.575472
39. ORIFICE BORE : text in
40. LINE I.D. : 13.250000 in
42. HOLE TYPE : SQUARE EDGED
43. PLATE THICKNESS : 0.1874 in
44. FLOWSHEET # : A1-28810-MF102

NOTES



PT BLORA TEKNIK

Jl. Raya Industri Desa Cicadas - Purwakarta
Telp./ Fax (0264) 212906 Hp.0813 1400 3413
E-mail : blorateknik@yahoo.co.id

CALIBRATION REPORT TRANSMITTER PT. INDOBARAT RAYON CS2 PLANT

Tag Name : FT- 5038 L TX Range : 0 ~ 38 mBar
Model No : STD 924 Date : 11 JUNI 2021
Manufacture : Honeywell

Calibrator Used : 1. Honeywell MCT 404
2. Hand Pump Fluke
Digital Gauge Pressure Calibrator 718 300 G.
3. Multi Meter Fluke 85 III

Standard			Before Calibration			After Calibration		
%	EU Inject	Referensi	Reading	Out Put	Error	Reading	Out Put	Error
	%	mA	Actual	mA	(%)	Actual	mA	(%)
0	0.00	4.000	-12.6	3.83	4.250	0.00	4.00	0.000
25	9,5	8.000	-5.1	3.82	52.250	9.5	8.02	-0.250
50	19.00	12.000	5.6	6.21	48.250	19.01	12.01	-0.083
75	28,5	16.000	12.9	10.7	33.125	28.5	16.01	-0.063
100	38.00	20.000	23.9	15.09	24.550	38.0	20.01	-0.050

NOTE : Check and Cleaning Visual
Calibration and Out Put
Check and adjust Calibration OK

Approved by :

Yayan Setiawan

Supervisor Indobarat Rayon.
CS2 PLANT

Calibrated by

H. Ade Duki Kusmayadi
Instrument PT. Blora Teknik



PT BLORA TEKNIK

Jl. Raya Industri Desa Cicadas - Purwakarta
Telp./ Fax (0264) 212906 Hp.0813 1400 3413
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CALIBRATION REPORT TRANSMITTER PT. INDOBARAT RAYON CS2 PLANT

Tag Name : FT- 5038 H TX Range : 0 ~ 150 mBar
Model No : STD 730 Date : 11 JUNI 2021
Manufacture : Honeywell
Calibrator Used : 1. Honeywell MCT 404
2. Hand Pump Fluke
Digital Gauge Pressure Calibrator 718 300 G.
3. Multi Meter Fluke 85 III

Standard			Before Calibration			After Calibration		
%	EU Inject	Referensi	Reading	Out Put	Error	Reading	Out Put	Error
	%	mA	Actual	mA	(%)	Actual	mA	(%)
0	0.00	4.000	0.44	4.08	-2.00	0.00	4.00	0.000
25	37.5	8.000	37.7	8.09	-1.13	37.5	8.00	0.000
50	75.0	12.000	75.2	12.04	-0.33	75.0	12.00	0.000
75	112.5	16.000	112.5	16.01	-0.06	112.5	16.00	0.000
100	150.0	20.000	150.0	20.01	-0.05	150.0	20.00	0.000

NOTE : Check and Cleaning Visual
Calibration and Out Put
Check and adjust Calibration OK

Approved by :

Yayan Setiawan

Supervisor Indobarat Rayon.
CS2 PLANT

Calibrated by

H. Ade Duki Kusmayadi
Instrument PT. Blora Teknik

FIELD Tag	SERVICE DESCRIPTION	Orifice DS Range (max deltaP/ max Flow)	Transmitter Range (URV)	DCS Range (URV)
FT7051	PAD WATER TO C790	50mbar (6800kg/hr)	50 mbar	6300kg/hr
FT2111	BOILER WATER DISCH. P - 263 / P - 264	125mbar (21000kg/hr)	250mbar	32370 kg/hr
FT3127	STEAM TO C - 340 STRIPPER	50 mbar (700kg/hr)	50 mbar	696kg/hr
FT4002	STEAM TO H - 401 STABILIZER REBOILER	125mbar (700kg/hr)	125mbar	800kg/hr
FT5035	S-509 INLET K.O DRUM OUTLET	71 mbar (4407.66 Sm3/hr)	71 mbar	4407.66 Sm3/hr
FT5038H	MAIN AIR TO R.F. BURNER	0.13 Bar (10690.86 Sm3/hr)	12.5 Kpa	10690.86 Sm3/hr
FT5038L	MAIN AIR TO R.F. BURNER	0.13 Bar (10690 Sm3/hr)	7.1 Kpa	6000 m3/hr
FT5050H	F-500 FUEL GAS TO R.F. BURNER	0.13 Bar (722.85 Sm3/hr)	12.5 Kpa	722 Sm3/hr
FT5050L	F-500 FUEL GAS TO R.F. BURNER (AJB-1)	0.13 Bar (722.85 Sm3/hr)	7.1 Kpa	722 Sm3/hr
FT5078	F-500 STEAM TO R.F. BURNER	0.50 Bar (5386 kg/hr)	50 Kpa	5386. kg/hr
FT5041	F-500 MAIN AIR TO R.F. BURNER	0.13 Bar (1470.55 Sm3/hr)	12.50 Kpa	1470.55 Sm3/hr
FT5090	V-506 BFW TO STEAM DRUM	0.25 Bar (13.64 m3/hr)	25 Kpa	13.64 m3/hr
FT5091	V-506 STEAM TO HP HEADER	0.13 Bar 13276.03 kg/hr)	12.5 KPa	13276.03 kg/hr
FT5201	F-500 FG TO INCINERATOR	0.13 Bar(351.35 Sm3/hr)	12.5 KPa	351.35 Sm3/hr
FT2002	NATURAL GAS TO H - 213	125mbar (2300kg/hr)	125mbar	2300 kg/hr
FT2004	NATURAL GAS TO H - 215 TO PASS 1	50 mbar (1000kg/hr)	50 mbar	1000kg/hr
FT2005	NATURAL GAS TO H - 215 TO PASS 9	50 mbar (1000kg/hr)	50 mbar	1000kg/hr
FT2006	NATURAL GAS TO H - 215 TO PASS 13	50 mbar (1000kg/hr)	50 mbar	1000kg/hr
FT7052	LPS TO C - 780 PAD WATER STRIPPER	125mbar (600kg/hr)	125mbar	600kg/hr