Certificate No.
2169/16

PPP ASPHALT PLANT SDN. BHD. (921262-P)

CALIBRATION CERTIFICATE

THIS IS TO CERTIFY THAT PPP DRUM MIXING ASPHALT PLANT

OF

OWNED BY

ABC PREMIX SDN BHD

AT JOHOR, PENAWANG SITE

HAS BEEN SUCESSFULLY CALIBRATED

ON

5TH SEPTEMBER 2016

PPP ASPHALT PLANT SDN BHD (921262-P)

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YAP CHEE LEONG
Director

CERTIFICATE EXPIRY 5TH SEPTEMBER 2017

PPP ASPHALT PLANT SDN BHD

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PPP 250TPH DRUM-MIX ASPHALT PLANT

CALIBRATION REPORT

OWNER: ABC PREMIX SDN BHD

SITE : JOHOR – PENAWANG SITE

MODEL: 250TPH

DATE : 5TH SEPTEMBER 2016

PPP ASPHALT PLANT SDN BHD (921262-P)
No. 9-1, Jalan PJS 3/32, Taman Sri Manja, Off Jalan Klang Lama,
46000 Petaling Jaya, Selangor Darul Ehsan, Malaysia.
Tel : +603-7784 3631, 7783 3604 • Fax : +603-7781 3863
Email : enquiry@pppasphalt.com GST NO: 001341505536

CONCLUSION

The calibration was completed at :

Date : **5-9-2016**

Time : **9.00 AM**

The recommended new unit factors are :

BITUMEN	:-	FEEDER 00 :-	**1061.70**
DUST 1	:-	FEEDER 01 :-	**5322.30**
DUST 2	:-	FEEDER 02 :-	**5537.60**
10MM	:-	FEEDER 03 :-	**4336.70**
20MM	:-	FEEDER 04 :-	**7525.30**
28MM	:-	FEEDER 05 :-	**5245.10**
FILLER	:-	FEEDER 06 :-	**81888.70**

NEXT CALIBRATION DATE : **5/9/2017**

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DYNAMIC CALIBRATION

DATE: 5/9/2016

ABC PR EMIX SDN BHD - BC404 SYSTEM-250TPH - PENA WANG SITE

			(OUF X PC Wt) / WB Wt	(PC Wt - WB Wt) / WB Wt %
BITUMEN		**FEEDER 00**		
OUF	**PC-RPM**	**CAL-RPM**	**NUF**	**DIF.,%**
1103.00	285.00	293.00	1072.90	-2.70%
1072.90	285.00	288.00	1061.70	-1.00%
1061.70	285.00	286.00	1058.00	-0.30%
DUST 1		**FEEDER 01**		
OUF	**PC-WT**	**WB.WT**	**NUF**	**DIF.,%**
4800.00	5.03	4.57	5283.20	10.1%
5283.20	5.02	4.69	5654.90	7%
5654.90	5.03	5.24	5428.30	-4%
5428.30	5.02	5.12	5322.30	-2%
5322.30	5.02	5.06	5280.20	-0.8%
DUST 2		**FEEDER 02**		
OUF	**PC-WT**	**WB.WT**	**NUF**	**DIF.,%**
4500.00	5.02	4.33	5217.10	15.9%
5217.10	5.01	4.72	5537.60	6.1%
5537.60	5.02	4.98	5582.10	0.8%
10MM		**FEEDER 03**		
OUF	**PC-WT**	**WB.WT**	**NUF**	**DIF.,%**
5037.40	5.02	6.06	4172.90	-17.20%
4172.90	5.03	4.84	4336.70	3.90%
4336.70	5.03	5.04	4328.10	-0.20%

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DYNAMIC CALIBRATION

DATE: 5/9/2016

ABC PREMIX SDN BHD - BC404 SYSTEM-250TPH - PENAWANG SITE

20MM		FEEDER 04		
OUF	PC Wt.	WB Wt.	NUF	DIF.,%
6800.00	5.01	4.67	7295.10	7.30%
7295.10	5.02	4.49	8156.20	11.80%
8156.20	5.01	5.43	7525.30	-7.70%
7525.30	5.00	5.03	7480.40	-0.60%
28MM		FEEDER 05		
OUF	PC Wt.	WB Wt.	NUF	DIF.,%
6000.00	5.00	5.86	5119.50	-14.70%
5119.50	5.01	4.89	5245.10	2.50%
5245.10	5.01	4.99	5266.10	0.40%
FILLER		FEEDER 06		
OUF	PC-RPM	CAL-RPM	NUF	DIF.,%
78200.00	222.00	212.00	81888.70	4.70%
81888.70	222.00	224.00	81157.60	-0.90%

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CALIBRATION FOR PPP DRUM MIXING ASPHALT PLANT

The weighing system of each feeder needs to be calibrated with both static calibration and dynamic calibration method. The purpose of calibration is to ensure that the proper amount of raw materials is being delivered to the plant to obtain the proper gradation for the mix.

STATIC CALIBRATION

This calibration is to confirm that the Loadcell is in working condition and also to ensure the proper gradation for mix.

FEEDER NO. 1

Loadcell details :-

CAPACITY	:	100KG	ZERO BALANCE	:	0,00754mv/v
MODEL	:	STCNP250LB	SENSITIVITY	:	1,99825mv/v
SERIAL NO	:	21560088	SAFE LOAD UNIT	:	150%
RATING	:	3mv/v	BREAKING LOAD UNIT	:	300%
OPERATING TEMP.	:	-300°C + 70°C			
REF. EXC. VOLTAGE	:	5V			
MAX. EXC. VOLTAGE	:	12V			

STATIC CALIBRATION FOR FEEDER AS FOLLOWING :-

Step	Work Procedure
1	Clear any stones from the weighing section of the belt.
2	Press SETUP once.
3	Press the SHIFT and ZERO buttons down at the same time.
4	Release the buttons together.
5	Place the 20 kg certified weight on the top of the weighing section of the belt.
6	Press the SHIFT and CAL buttons down at the same time.

PPP ASPHALT PLANT SDN. BHD. (921262-P)

FEEDER NO. 2

Loadcell details :-

CAPACITY	:	100KG	ZERO BALANCE	:	0,00754mv/v
MODEL	:	STCNP250LB	SENSITIVITY	:	1,99825mv/v
SERIAL NO	:	21560089	SAFE LOAD UNIT	:	150%
RATING	:	3mv/v	BREAKING LOAD UNIT	:	300%
OPERATING TEMP.	:	-300°C + 70°C			
REF. EXC. VOLTAGE	:	5V			
MAX. EXC. VOLTAGE	:	12V			

STATIC CALIBRATION FOR FEEDER AS FOLLOWING :-

Step	Work Procedure
1	Clear any stones from the weighing section of the belt.
2	Press SETUP once.
3	Press the SHIFT and ZERO buttons down at the same time.
4	Release the buttons together.
5	Place the 20 kg certified weight on the top of the weighing section of the belt.
6	Press the SHIFT and CAL buttons down at the same time.

FEEDER NO. 3

Loadcell details :-

CAPACITY	:	100KG	ZERO BALANCE	:	0,00754mv/v
MODEL	:	STCNP250LB	SENSITIVITY	:	1,99825mv/v
SERIAL NO	:	21560092	SAFE LOAD UNIT	:	150%
RATING	:	3mv/v	BREAKING LOAD UNIT	:	300%
OPERATING TEMP.	:	-300°C + 70°C			
REF. EXC. VOLTAGE	:	5V			
MAX. EXC. VOLTAGE	:	12V			

STATIC CALIBRATION FOR FEEDER AS FOLLOWING :-

Step	Work Procedure
1	Clear any stones from the weighing section of the belt.
2	Press SETUP once.
3	Press the SHIFT and ZERO buttons down at the same time.
4	Release the buttons together.
5	Place the 20 kg certified weight on the top of the weighing section of the belt.
6	Press the SHIFT and CAL buttons down at the same time.

FEEDER NO. 4

Loadcell details :-

CAPACITY	:	100KG	ZERO BALANCE	:	0,00754mv/v
MODEL	:	STCNP250LB	SENSITIVITY	:	1,99825mv/v
SERIAL NO	:	21560090	SAFE LOAD UNIT	:	150%
RATING	:	3mv/v	BREAKING LOAD UNIT	:	300%
OPERATING TEMP.	:	-300°C + 70°C			
REF. EXC. VOLTAGE	:	5V			
MAX. EXC. VOLTAGE	:	12V			

STATIC CALIBRATION FOR FEEDER AS FOLLOWING :-

Step	Work Procedure
1	Clear any stones from the weighing section of the belt.
2	Press SETUP once.
3	Press the SHIFT and ZERO buttons down at the same time.
4	Release the buttons together.
5	Place the 20 kg certified weight on the top of the weighing section of the belt.
6	Press the SHIFT and CAL buttons down at the same time.

FEEDER NO. 5

Loadcell details :-

CAPACITY	:	100KG	ZERO BALANCE	:	0,00754mv/v
MODEL	:	STCNP250LB	SENSITIVITY	:	1,99825mv/v
SERIAL NO	:	21560091	SAFE LOAD UNIT	:	150%
RATING	:	3mv/v	BREAKING LOAD UNIT	:	300%
OPERATING TEMP.	:	-300°C + 70°C			
REF. EXC. VOLTAGE	:	5V			
MAX. EXC. VOLTAGE	:	12V			

STATIC CALIBRATION FOR FEEDER AS FOLLOWING :-

Step	Work Procedure
1	Clear any stones from the weighing section of the belt.
2	Press SETUP once.
3	Press the SHIFT and ZERO buttons down at the same time.
4	Release the buttons together.
5	Place the 20 kg certified weight on the top of the weighing section of the belt.
6	Press the SHIFT and CAL buttons down at the same time.

STATIC CALIBRATION

The WT200 Signal Conditioner needs to be set to give a correct signal to the Control System. The Zero needs to be set to give volts with no weight and the Span to give a known voltage at a known weight.

It is recommended that a known calibration weight is used and that this weight stays with the Plant so that the Static calibration can be checked at any time. Ideally the calibration weight should be 80% of the weight of a full platform of the most dense material. In practice this is 30Kg for a Plant of less than 150TPH capacity and 40Kg for the larger Plants.

The steph for the Static Calibrations are :

a) Put the Stations Zero Weight/Temp to 0.

b) Remove all the aggregate from over the weigh section and adjust the WT200 Zero Potentiometer until there is 0 volts between pins 2 and 3 on a multimeter or until the Zero LED's are extinguished.

c) Put the calibration weight over the weigh roller or hang the weight off the edge of the weigh roller. Adjust the WT200 Span Potentiometer so that the Span LED is on the point of illuminating and extinguishing.

d) Change the Station Weight / Span to indicate the weight of the calibration weight.

DYNAMIC CALIBRATION (UNIT FACTOR)

The Dynamic calibration is a process of changing the Unit Factor so as to make the weight delivered by a weighfeeder agree with the weight read across a weghbridge.

The steps for a Dynamic Calibration are :

a) Ensure that the Static Calibration for the weighfeeder is correct.

b) Check that the weigh bridge is correctly calibrated.

c) Set the Moisture Content and Fines Loss to 0%.

d) Run through a minimum of 3 time with 5 tonne loads. Weigh these and if they are consistent, average the 3. Now correct the Unit Factor by.

$$\textit{New Unit Factor} = \frac{\textit{Old Unit Factor X Average Displayed Weight}}{\textit{Average Weigh bridge Weight}}$$

e) Alter the Unit Factor on the Station Setup Screen.

f) Return to the Control Screen.

g) Run 5 tonnes through. If the Control System agrees with the weigh bridge, the weigh feeder is calibrated. If not, run a further 3 loads through, average them and repeat the claculation.

h) Run 5 tonnes throught

BITUMEN METERING PUMP

STEP WORK PROCEDURE

1 Start the Bitumen Pump and circulate Bitumen.

2 Check the Bitumen Temperature and calculate the Motor Required RPM by :

$$\textit{Motor RPM} = \frac{274.923}{\frac{1.0178 - (T-15) \times 4}{10{,}000}}$$

3 Run Bitumen Pump on idling speed of 2.5TPH.

4 Calculate the New Unit Factor by :

New Unit Factor = Old Unit Factor x Motor RPM / Actual Motor RPM

5 Click the mouse on the word Setup, When the drop menu appears click on the feeder 00. Enter New Unit Factor.

6 If the RPM showing in Control Screen is not tally with the theoretical RPM, repeat Setp 3 to Step 5, If the PC agrees with the theoretical RPM, within tolerance of 0.5% the Bitumen Metering Pump is calibrated.

7 Slight " fine tuning" may require in case of pump wear-out, and that can be work out as follows :-

New Unit Factor = Old Unit Factor x Designed Bitumen % / Actual Bitumen %