DALMIA CEMENT (B) LIMITED – CEMENT PLANT ARIYALUR INSTRUMENTATION DEPARTMENT			
Issue No. 02	**Rev. No: 00**	**Effective Date: 01.11.2019**	**WI-12 (SP-8; AM-7)**
Issued By: M.R		**Approved By: HOD-INSTRUMENTATION**	
CALIBRATION PROCEDURE FOR STOCK PILE CROSS BELT ANALYSER			

The Instrument engineer takes action as follows, for calibration:

1.1 TO MAKE THE SYSTEM READY FOR CALIBRATION

1.1.1 Get the clearance from process and stop the 211BC3 and make necessary permit & take EIP

1.1.2 The Standard samples (116, 117, 118, 119 & 120) required for Calibration of Cross Belt Analyzer shall be shifted nearer to the CBA

1.2 STATIC CALIBRATION

1.2.1 The calibration mat with pulling rope shall be placed at entrance of the analyzer and over the belt conveyor.

1.2.2 Place 100 Nos. of 116 standard sample packets on the Calibration mat as per sample loading pattern mentioned below and pulls the samples inside the analyzer with help of rope.

1.2.3 Change the instrument from RUN mode to Calibration mode do the following action

a. Click the Hardware.Htm tab from Analyzer Computer
b. Select the Cal Mode button
c. Select the Calibration dialog button
d. Select Analyzer Mode from RUN to Calibrate
e. Enter the Standard No. in Standard Name
f. Enter the 200 in Loading
g. Enter Comments if required.

1.2.4 The standard samples shall be kept inside the Analyzer for one hour and Observe the Result

1.2.5 Repeat the steps from 1.2.1 to 1.2.4 for remaining other standards(117, 118, 119 & 120)

1.2.6 After running all the standard samples , cross check the results with standard reference value Table-1 for the each elements SiO_2, Al_2O_3, Fe_2O_3, CaO,K_2O, SO_3, MgO & Na_2O

1.2.7 Calculate the RMSD as given below

x_1 = Reference Standard Value

x_2= Static run Values

$$\mathrm{RMSD} = \sqrt{\frac{\sum_{t=1}^{n} (x_{1,t} - x_{2,t})^2}{n}}.$$

1.2.8 The calculated RMSD of the Result shall be within limit as mentioned Table-2.

1.2.9 If the results are found not within the limit, Calibration results to be sent to OEM for getting static correction.

1.2.10 The correction shall be done C:/Progrmdata/Thermo/ Nautilus/Config/Rexx/ Cement.field.Det1 and Cement.field.Det2

2.0 CONNECTED DOCUMENT:

F-1/WI-12(SP-8; AM-7) CALIBRATION OF CROSS BELT ANALYSER STOCK PILE

Standard Reference Value

Standard	SiO2	Al2O3	Fe2O3	CaO	K2O	TiO2	SO3	MgO	Na2O
116	3.82	0.07	0.05	52.99	0.01	0.01	0.02	0.69	0.01
117	9.99	5.26	2.56	42.87	0.76	0.48	0.52	1.70	0.74
118	14.53	2.86	4.90	35.80	1.55	0.97	0.27	4.67	1.46
119	20.09	8.09	9.86	27.56	2.36	1.95	0.78	3.12	2.28
120	25.59	10.81	7.57	18.00	3.24	2.68	1.81	7.24	3.14

Table-1

RMSD Guarantee for Reference Vs Static Run Value

Standard	SiO2	Al2O3	Fe2O3	CaO	K2O	TiO2	SO3	MgO	Na2O
Spec	**0.40**	**0.35**	**0.10**	**0.40**	**0.15**	**0.05**	**0.40**	**0.50**	**0.30**

Table-2

Sample Loading Pattern: From Bottom 4X5, 3X5, 4X5, 5X5, 3X5, 1X5. Total 100 Packets (200 Kg)

Figure-1