


CONCRETE PLANNERS™

Floor Flatness Surveying & Consulting Services

Flooring solutions

Concrete Repairs

Maintenance

Refurbishments

What we do?

Floor repairs and refurbishments | Testing | Consulting

We are the leading company providing services of Defect Investigation, floor repair solutions, testing & certifications and consulting services under one roof in India and Eastern African Countries like Ethiopia, Kenya, Uganda and Zambia.

Our expert engineers are specially trained to find out the root cause of the flooring problems and follow strict compliance of global industry standards like ASTM and TR34 to maintain the quality standards of industrial concrete floors for our customers. This ensures the delivery of most durable, strong and less maintenance floors. SOP followed by our engineers is **Testing** → **Repairing** → **Testing (Positive results)** → **Happy customer**. We use world's most sophisticated and most precise measuring equipments for testing and measurements of Random Traffic floors (Mostly FM2 Floors) and Defined Movement Floors (DM). Customers get the results instantly on the floor and doesn't have to wait for 3 days for the results and certification. This saves lot of time of customer to start the operations on newly constructed floor. Our latest testing machines produces results of mandatory tests like soil/ ground compaction, concrete air content, concrete strength, floor flatness and levelness results right away on job site!

Free movement floor testing and certification 15Rs. Per Sqm

Industrial facilities like warehouses, distribution centers, retail stores, factories, etc. need best quality of floors. The revenue of such facilities is directly linked to number of goods dispatches. Therefore, flooring of such facilities must comply to free movement flooring specifications.

Measuring standards:

- TR34- FM 1/2/3/4
- ASTM- E1155
- DIN 18202

Table 3.1: Permissible 95 percentile values on Properties E and F.

Floor class	Typical floor use	Property	
		E	F
FM1	Where very high standards of flatness and levelness are required. Reach trucks operating at above 13m without side-shift.	4.5	1.8
FM2	Reach trucks operating at 8 – 13m without side-shift.	6.5	2.0
FM3	Retail floors to take directly applied flooring. Reach trucks operating at up to 8m without side-shift. Reach trucks operating at up to 13m with side-shift.	8.0	2.2
FM4	Retail floors to take applied screeds. Workshops and manufacturing facilities where MHE lift heights are restricted to 4m.	10.0	2.4

Note: Side-shift is the ability of a truck to adjust the pallet transversely to the fork direction.

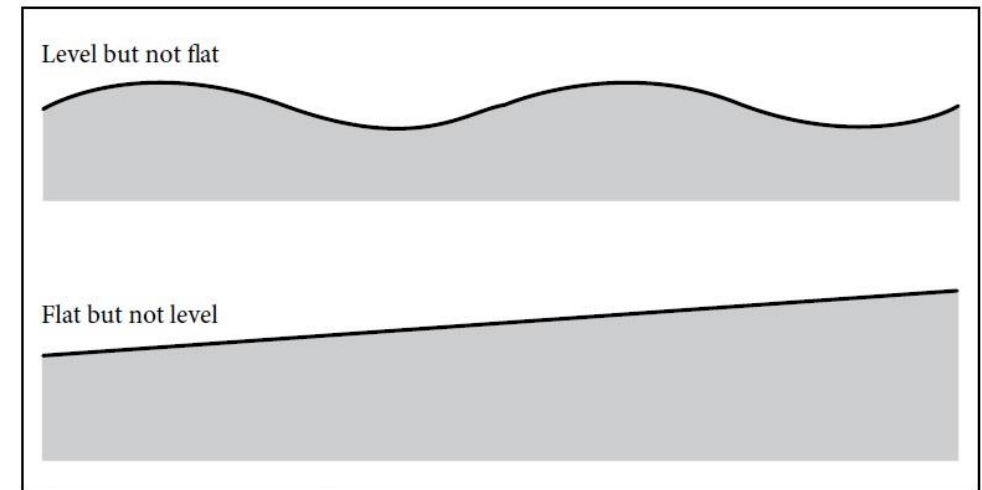


Figure 3.1: Flatness and levelness.

Defined movement floor testing and certification N/A

Floors where VNA truck and high racking system (8m and above) is to be installed.

Measuring standards:

- TR34- DM 1/2/3
- ACI- Fmin

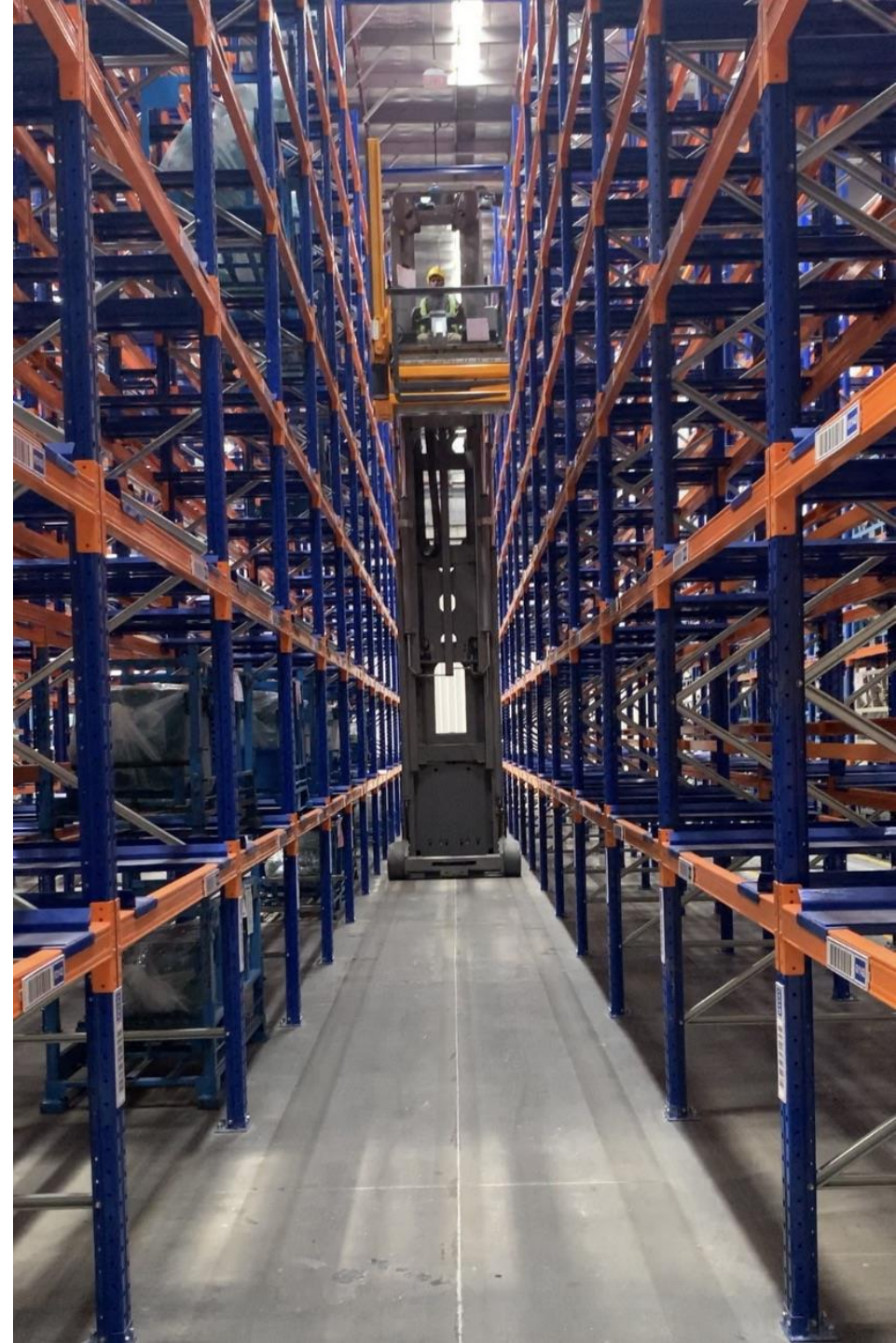


Table 3.2: Permissible limits on Properties dZ, dX, d²Z and d²X in defined-movement areas.

Floor classification	Racking top beam height	Property Z _{SLOPE}	Property dZ	Property d ² Z	Property dX	Property d ² X
Calculation	-	mm per m	Z × Z _{SLOPE}	dZ × 0.75	Fixed values 2 × Z _{SLOPE} × 1.1	Fixed values
DM1	Over 13m	1.3	Z × 1.3	Z × 1.0	2.9	1.5
DM2	8–13m	2.0	Z × 2.0	Z × 1.5	4.4	2.0
DM3	Up to 8m	2.5	Z × 2.5	Z × 1.9	5.5	2.5

Properties measured

The following properties are defined in Figures 3.8–3.10 as follows:

- **Property Z:** The transverse dimension between the centres of the truck front wheels, in m.
- **Property X:** The longitudinal dimension between the centre of the front and rear truck axes. This is taken to be a fixed 2m.
- **Property Z_{SLOPE}:** The cross-aisle slope between the centres of the truck front wheels in mm/m.
- **Property dZ:** The elevational difference in mm between the centres of the truck front wheels.
- **Property dX:** The elevational difference in mm between the centre of the front axle and the centre of the rear axle.

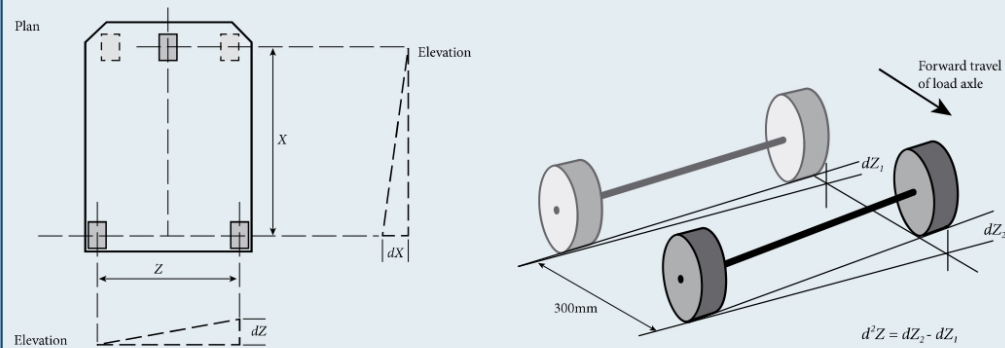


Figure 3.8: Symbols for dimensions.

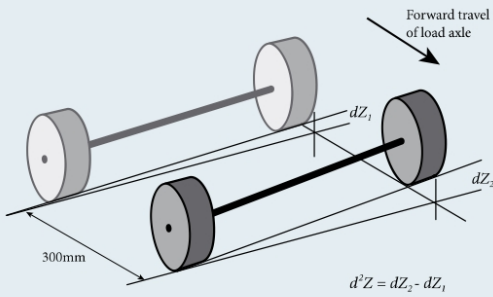


Figure 3.9: Determination of d²Z.

Property d²Z: The change in dZ in mm over a forward movement of 300mm along the wheel tracks
Property d²X: The change in dX in mm over a forward movement of 300mm along the wheel tracks.

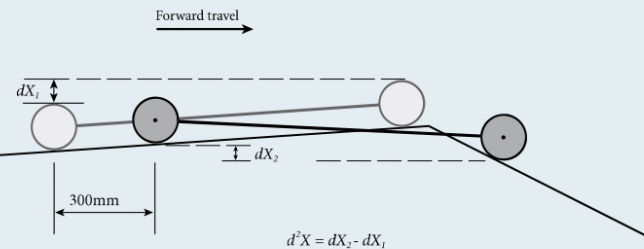
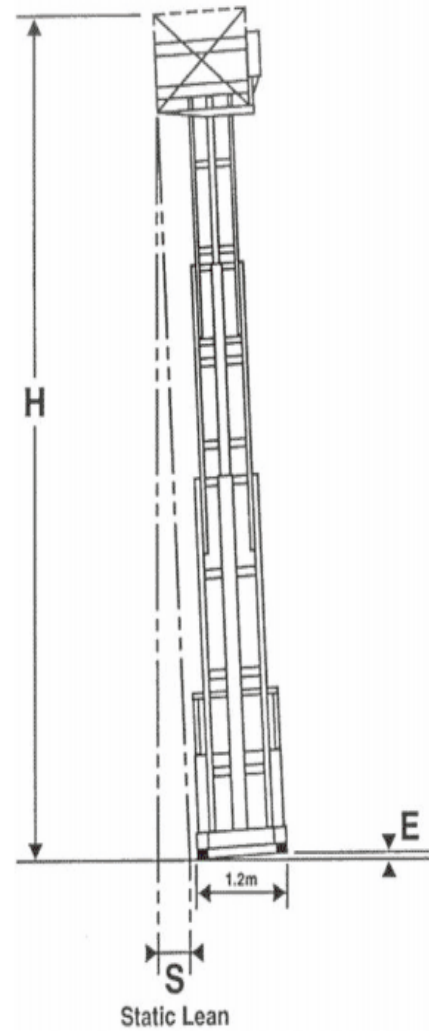


Figure 3.10: Determination of d²X.



(E) - Difference in elevation between the left and right hand fork lift truck wheels in mm

H - Height of racking in metres	(E) - Difference in elevation between the left and right hand fork lift truck wheels in mm									
	3	4	5	6	7	8	9	10	11	12
6	15	20	25	30	35	40	45	50	55	60
6.5	16	22	27	33	38	43	49	54	60	65
7	18	23	29	35	41	47	53	58	64	70
7.5	19	25	31	38	44	50	56	63	69	75
8	20	27	33	40	47	53	60	67	73	80
8.5	21	28	35	43	50	57	64	71	78	85
9	23	30	38	45	53	60	68	75	83	90
9.5	24	32	40	48	55	63	71	79	87	95
10	25	33	42	50	58	67	75	83	92	100
10.5	26	35	44	53	61	70	79	88	96	105
11	28	37	46	55	64	73	83	92	101	110
11.5	29	38	48	58	67	77	86	96	105	115
12	30	40	50	60	70	80	90	100	110	120
12.5	31	42	52	63	73	83	94	104	115	125
13	33	43	54	65	76	87	98	108	119	130
13.5	34	45	56	67	79	90	101	112	124	135
14	35	47	58	70	82	93	105	117	128	140
14.5	36	48	60	72	85	97	109	121	133	145
15	37	50	63	75	87	100	113	125	137	150
15.5	39	52	65	77	90	103	116	129	142	155
16	40	53	67	80	93	107	120	133	147	160
16.5	41	55	69	82	96	110	124	137	151	165
17	42	57	71	85	99	113	128	142	156	170
17.5	44	58	73	88	102	117	131	146	160	175
18	45	60	75	90	105	120	135	150	165	180

Soil compaction test

2000Rs. Per Test

Advantage

- Fast and cost effective
- Reliable and precise
- Quick reporting

Applications

- Industrial construction, earth works
- Testing pavement beddings
- Testing foundation backfill
- Testing of modulus of deformation within the framework of soil examination



Dynamic Plate Load
Test According To
TP BF - STB PART B 8. 3,
ASTM E2835-11

Concrete Planners

HMP LGFPRO
NR. 16427

Examiner

Weather/ Temperature

Project

Test Surface/Layer
nr.: 2

Testdate/Time
28.08.2018/16:41

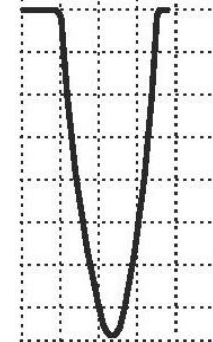
GPS-Position
N 52°10'36.70
E 11°39'39.33

n	sn(mm)	Vn(mm/s)
1	0.790	203.6
2	0.785	203.2
3	0.788	202.9
MW	0.788	203.2

Evaluation:

Evd= 28.55 MN/m²
S/v= 3.88 ms

t= 5ms/T, s=0, 10mm/T.

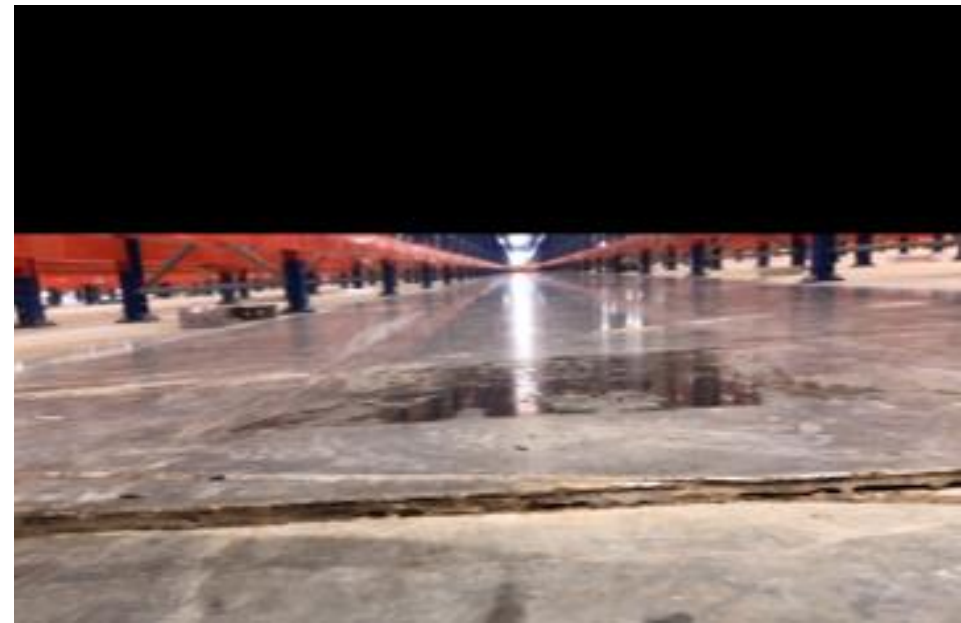


Remedial grinding N/A

Bad levels and flatness of concrete floor reduces the productivity of the VNA system by more than 50%. Our signature remedial grinding system bring back the flatness and levelness of concrete floor to take the optimum benefit of installed VNA system

Benefits

- Increases operational efficiency and productivity.
- Extends floor life and minimizes the floor maintenance cost.
- Minimizes MHE maintenance cost and reduces accidental chances.
- Cost effective in comparison with over lay system. Over lay system needs lot of preparation like priming, surface preparation, curing time, etc. whereas grinding system can be put in place in as it is floor conditions and floor can be put on use immediately after grinding.
- In overlay system, installation of magnets/ transponders or guiding wire needs re-installation or lot of adjustments, wherein grinding system does not need any of this adjustment.
- Overlay system commonly have de-lamination problem.



Joint repair system N/A



Joints of concrete floor should be monitored on regular basis and need special care. According to global industry standards joints maintenance should be:

- Monitored during daily cleaning and maintenance.
- Inspected (spalling/ other damage) and repaired every 3 months

In this system we cut the joint to make it straight, grind the edge to remove the step and seal with the appropriate sealant which is strong enough to protect the arris and avoid spalling.

Pothole repairs N/A

This is very common problem with many of industrial concrete floors. Usually happens because of impact of heavy or sharp items or weak concrete or poorly finished concrete surface. Potholes should be repaired immediately when observed on the flooring, else they may become the reason of many other flooring performance issues.

Our engineers find out the root cause of the pothole before carrying out any remedial work.

Benefits

- Increases operational efficiency and productivity.
- Extends floor life and minimizes the floor maintenance cost.
- Minimizes damage to MHE wheels and axles.
- We use best products offered from following manufacturers



Our prestigious customers/ end users

- African Future College Lusaka, Zambia.
- M/S Mafico Services P. Ltd, Jaipur.
- Bestseller, Mumbai.
- BGSB Concrete Solutions Pvt Ltd, Gurgaon
- BGSB Concrete Africa Ltd, Nairobi, Kenya.
- Rudraksh Logistics, Mumbai.
- Buildcon Consultants Pvt Ltd, Jaipur.
- Chem Coats, Chennai.
- Curation Tech Pvt Ltd, Gurgaon.
- Durapro Build Solutions, Delhi.
- Ecoclad Buildsys Pvt. Ltd. Chandigarh.
- EIH Limited (The Oberoi Group), Delhi.
- Embassy Industrial Parks, Bangalore
- Flipkart, Bangalore
- Guru Kripa Flooring Punjab
- Impact Floors India Pvt. Ltd. Mumbai
- J.K.Infra Bilaspur Gurgaon
- Lamba Techno Flooring Solutions Pvt Ltd, Delhi
- Landmark Construction, Chennai.
- Mahindra & Mahindra

Our prestigious customers/ end users

- | | |
|--------------------------------------------------------------------|------------------------------------------|
| • Pragati Infra Solutions Pvt. Ltd | • Hero India |
| • S3M Design Consultants LLP, Gujrat | • Larsen and Toubro Limited Construction |
| • Varuna Warehousing Pvt. Ltd. Haryana | • LOTS Wholesale Solutions |
| • Vakil Mehta Sheth Consulting Engineers, Mumbai | • Maruti Suzuki India Limited |
| • All Cargo Logistics, Mumbai | • NB Infratech |
| • Amazon India | • OnnSynex Ventures Pvt. Ltd. |
| • Borosil Limited | • Pragati Infra Solutions Pvt. Ltd |
| • Decathlon India | • Shudh Plus, Gorakhpur. |
| • Emitec Emission Control Technologies India Private Limited, Pune | • Vadilal Industries Ltd, Gujarat. |
| • ESR Kolkata | • Volkswagen India Pvt Ltd, Pune. |
| • Green Valley Agro Fresh, Jammu & Kashmir. | • Walmart India Pvt Ltd, Gurgaon. |
| • Suri Agro Fresh, Delhi. | • Gallops Industrial Park, Gujarat. |

Feel free to contact us for your queries!



CONCRETE PLANNERS
Floor Flatness Testing & Training Services

Certified by:
FACE
Face Construction Technologies

OUR SERVICES:

- Slab Design Criteria
- Base and Sub-Base Materials
- Concrete Thickness
- Concrete Compressive Strength
- Testing Requirements
- Special Embedment's
- Tolerances
- Concrete Curing
- Joint location and Details
- Surface Finish

CONTACT US

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