



DATA REQUIREMENT FROM VENDOR (CIVIL-STRUCTURAL) FOR COMPRESSOR

PROJECT : Installation of New GTC Compressor at Gandhar,
Gujarat,

OWNER : Gas Authority of India Limited

PMC : Engineers India Limited

JOB NO. : B240

A	27.03.19	ISSUED FOR MR	LP	CK	VG
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

The minimum data required from vendor for Civil structural design of Compressor foundation (by others) for Revival of Ramagundam Fertilizer Complex project shall be following:

1. LAYOUT

- i. The sizes of different parts of concrete foundation with proper plan dimensions and elevations.
- ii. The pocket sizes in plan, their depths and locations. The distance between edge of pocket and outside edge of concrete shall be kept as minimum 100mm.
- iii. The locations and sizes of bolts in case they are to be placed in position at the time of concreting. The distance between bolt and outside edge of concrete shall be kept as 125mm (minimum).
- iv. The thickness and type of non-shrink/epoxy grout.
- v. The location of machine reference axis in X,Y direction in plan and Z in Elevation.
- vi. Layout and details of all auxiliary equipments, operating/maintenance platforms, along with the machine.
- vii. Location and size of openings if any, on foundation/platform.
- viii. Detail of all embedded parts like insert/ G.I. sleeve etc.

2. LOADING

- i. The static loads from different components of the machine and locations of the line of action of all these loads defined in all three axes.
- ii. The static weights of the rotating parts of the machine.
- iii. Dynamic loading/equivalent static design of the foundation.
- iv. Static loading of Auxiliary equipments/maintenance platforms, and loads on inserts, as applicable.

3. AMPLITUDES AND FREQUENCIES

The magnitude of permissible amplitudes of vibration shall be supplied at the bottom of base frame/top of concrete foundation.

Vendor shall note that:

- i. If the magnitude of permissible amplitude of vibration at the bottom of base frame/top of foundation is not specified, the same shall be assumed to be 200 microns one way (i.e. 400 microns peak to peak) as per IS:2974, part I.
- ii. The natural frequencies of vibration of the machine foundation system shall be kept +20% away from the operating frequency of the machine.

4. UNBALANCED FORCES

The magnitudes and direction of all unbalanced forces caused due to out of balance of the rotating parts at the bottom of base plat/top of foundation at any one particular instant of time. (Different set of unbalanced forces at another instant of time, if any, shall be furnished as a separate set; unbalanced forces at different instants of time shall not be clubbed together).

5. OPERATING FREQUENCY/CRITICAL SPEED

- i. The operating frequencies of the machine and the drive.
- ii. The critical speed of the machine, as applicable.

6. MISCELLANEOUS

- i. Distance of main shaft of machine from top of machine foundation and Mass Moment of Inertia.
- ii. Type and position of anti-vibration mountings, if recommended, including their static and dynamic properties.
- iii. GD2 value of each item resolved to motor speed.
- iv. Any other information necessary for comprehensive design of the foundation system, requiring special consideration during engineering.