FIELD VISIT REPORT

KMC COLLEGE OF LAW, TIRUPUR

11.03.2024

DEPARTMENT OF CIVIL ENGINEERING

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About KMC College of Law

KMC College of Law, Tirupur, is an institution affiliated to The Tamil Nadu Dr. Ambedkar Law University, Chennai & approved by the Bar Council of India, New Delhi.

The current campus at Arulpuram, Tirupur is a temporary building with all the required facilities including spacious classrooms, library, e-library, moot court hall, legal aid clinic, common rooms, 2-acre sports ground, indoor game facilities and others. It is 5 km from the Tirupur District Court, enabling the students to visit the Court and have a practical experience simultaneously while learning the subject.

The new campus is being built by Shanmathi Constructions (P) Ltd, Erode at Perumanallur, Tirupur near KMC Public Senior Secondary School.

Roof Concreting – Boom pump

Boom concrete pump is used in the site for concreting since the floor height of the reception area is 40 feet.

A boom pump is a type of concrete pump that is used to transfer liquid concrete through a pipeline to the location where it is needed. It consists of a large, articulated arm, called a boom, mounted on a truck or trailer. The boom can be extended and maneuvered to reach difficult or elevated locations, allowing concrete to be poured with precision and efficiency.

III year Civil Engineering students at KMC on 11.03.2024

Boom pumps are commonly used in construction projects such as high-rise buildings, bridges, and large infrastructure projects where traditional methods of pouring concrete may be impractical or inefficient. They offer advantages such as faster placement of concrete, reduced labor requirements, and the ability to access hard-to-reach areas.

These pumps are operated by skilled operators who control the movement of the boom and the flow of concrete to ensure accurate placement and optimal performance. Boom pumps come in various sizes and configurations to suit different project requirements, with some models capable of reaching heights of over 200 feet (60 meters) and delivering large volumes of concrete per hour.

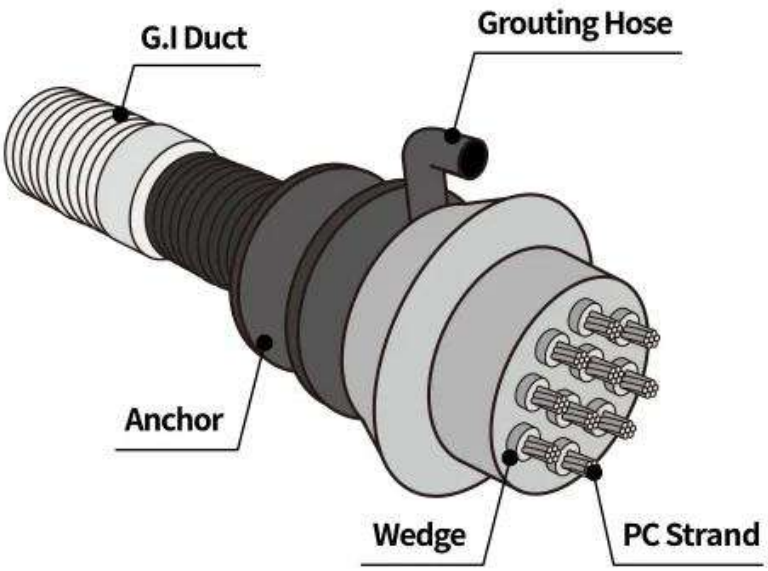
PT (Post Tensioned) Beams

Post tensioned beams are used in the roof. A post-tensioned beam is a structural element commonly used in building construction to support loads and span distances. It is a reinforced concrete beam that has been pre stressed using high-strength steel tendons or cables that are tensioned after the concrete has cured.

Post-tensioned beams offer several advantages over traditional reinforced concrete beams, including:

- **Increased Strength and Efficiency:** Post-tensioning allows for the optimization of material use, resulting in more efficient and lightweight structural elements that can span longer distances and support higher loads.

- **Reduced Cracking:** By applying compression to the concrete, post-tensioning helps to minimize cracking and improve the durability of the structure.
- **Flexibility in Design:** Post-tensioned beams can be designed to accommodate complex shapes and architectural requirements, offering greater design flexibility compared to conventional reinforced concrete beams.
- **Construction Speed:** The post-tensioning process can accelerate construction schedules by allowing for faster concrete curing times and enabling longer spans with fewer supports.



Outcome:

At the end of the visit, students were able to gain knowledge on

(i) Slab reinforcement and concreting using boom pump

(ii) PT (Post Tensioned) beam detailing

POs & PSOs Mapped:

PO1, PO5, PO6, PO7, PO11, PO12 ***PSO3, PSO4***