ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889,
2024-6.875 ResearchBib IF: 8.848 / 2024

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-4, ISSUE-12

INDUSTRY-SPECIFIC TERMINOLOGY IN ENGLISH FOR CIVIL ENGINEERING STUDENTS.

TDMAU "Uzbek language and literature" department teacher:
Nazarova Lola Qurbanovna
TDMAU student: QM24B group student **Raxmonov Javoxir,**
Akhmatov Farukh, ***Amirqulov Quvonchbek,*** **O‘rolov Otabek** .

Keywords: Structural Engineering, Construction Materials, Hydraulic Engineering, Building Codes and Standards

Annotation: This article discusses the ways to write and read terms related to the field of Civil Engineering in English. Detailed information on building codes and standards

Here are some key industry-specific terminology and concepts in English for civil engineering students:

1. Structural Engineering

Beam: A long, horizontal structural element designed to support loads.

- Column: A vertical structural element that transfers loads from beams to foundations.
- Load-bearing capacity: The maximum load a structure can safely carry.
- Shear Force: A force that causes two adjacent parts of a material to slide past each other.
- Moment of Inertia: A measure of an object's resistance to bending or rotation.

Structural engineering is a sub-discipline of civil engineering in which structural engineers are trained to design the 'bones and joints' that create the form and shape of human-made structures. Structural engineers also must understand and calculate the stability, strength, rigidity and earthquake-susceptibility of built structures for buildings and nonbuilding structures. The structural designs are integrated with those of other designers such as architects and building services engineer and often supervise the construction of projects by contractors on site. They can also be involved in the design of machinery, medical equipment, and vehicles where structural integrity affects functioning and safety. See glossary of structural engineering.

Structural engineering theory is based upon applied physical laws and empirical knowledge of the structural performance of different materials and geometries. Structural engineering design uses a number of relatively simple structural concepts to build complex structural systems. Structural engineers are responsible for making creative and efficient use of funds, structural elements and materials to achieve these goals.

2. Construction Materials

- Concrete: A composite material made of cement, sand, gravel, and water. Rebar (Reinforcement Bar): Steel bars used to reinforce concrete.
- Asphalt: A mixture of bitumen and aggregate used for road construction.
- Masonry: Construction using stone, brick, or concrete block.
- Timber: Wood used as a construction material.

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889,
2024-6.875 ResearchBib IF: 8.848 / 2024

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-4, ISSUE-12

3. Surveying and Measurement

- Total Station: An optical/electronic instrument used in surveying to measure distances, angles, and elevations.
- Leveling: The process of determining the elevation of points on the ground.
- Benchmark: A reference point with known elevation used in surveying.
- Planimeter: A tool used to measure the area of irregular shapes on maps or blueprints.

4. Geotechnical Engineering

- Soil Mechanics: The study of the physical properties of soil and its behavior under different conditions.
- Bearing Capacity: The ability of soil to support the loads applied to the ground.
- Retaining Wall: A structure designed to hold back soil or rock from a building site.
- Permeability: The ability of soil to transmit water or air.

5. Hydraulic Engineering

- Flow Rate: The volume of fluid passing through a given point in a system per unit of time.
- Drainage System: A system designed to manage the removal of surface water or groundwater.
- Culvert: A structure used to allow water to flow under a road, railway, or other infrastructure.
- Floodplain: Land that is prone to flooding due to its proximity to a body of water.

6. Transportation Engineering

- Pavement Design: The process of designing the structure of roads and highways.
- Traffic Flow: The movement of vehicles or pedestrians in a specific direction along a road or path.
- Interchange: A system of connecting roads, often with overpasses or underpasses, to allow traffic to change routes.
- Accident Analysis: The study of road accidents to improve safety and traffic management.

7. Environmental Engineering

- Sustainable Development: Designing and building with minimal environmental impact, ensuring resources are available for future generations.
- Water Treatment: The process of removing contaminants from water to make it suitable for consumption.
- Wastewater: Water that has been used and contaminated by industrial, household, or agricultural activities.
- Landfill: A site for the disposal of waste materials by burial.

8. Construction Management

- Project Scheduling: The process of planning the timeline of a construction project, including milestones and deadlines.
- Blueprint: A detailed technical drawing or plan for construction.

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 8.848 / 2024

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-4, ISSUE-12

- Bill of Quantities (BOQ): A document that provides a detailed breakdown of the materials and labor required for a construction project.
- Change Order: A formal document that alters the original terms of a construction contract.

9. Building Systems

- HVAC: Heating, Ventilation, and Air Conditioning systems in buildings.
- Fireproofing: The process of making structures resistant to fire through materials or treatments.
- Electrical Load: The amount of electrical power required for a building or system.
- Plumbing: The system of pipes and fixtures used for the distribution of water and removal of waste.

10. Construction Safety

- PPE (Personal Protective Equipment): Gear worn to protect workers from injury on construction sites, including helmets, gloves, and safety boots.
- Risk Assessment: The process of identifying hazards and evaluating risks on a construction site.
- Fall Protection: Systems designed to prevent falls from heights in construction.
- Scaffolding: Temporary structures used to support workers and materials during construction.

11. Building Codes and Standards

- ASCE (American Society of Civil Engineers): A professional organization that sets standards for civil engineering.
- IBC (International Building Code): A set of standards and regulations for building construction.
- Seismic Design: Designing structures to withstand earthquakes.
- Fire Safety Code: A set of regulations to prevent fires and ensure safety during emergencies.
- These terms represent various aspects of civil engineering, providing a foundation for students to understand the complexities of the profession.

USED LITERATURE

1. **2018 International Building Code Illustrated Handbook** Call Number: TH420.T46
2. **Uniform Plumbing Code [electronic resource]** Call Number: KF5709.I65
3. Facility Management · For Enterprises · HSB (Munich Re) Partner · Cooling Towers

Sites:

1. https://www.nist.gov/buildings-construction/understanding-building-codes
2. https://info.wint.ai/property-management?utm_term=building%20management%20systems&utm_campaign