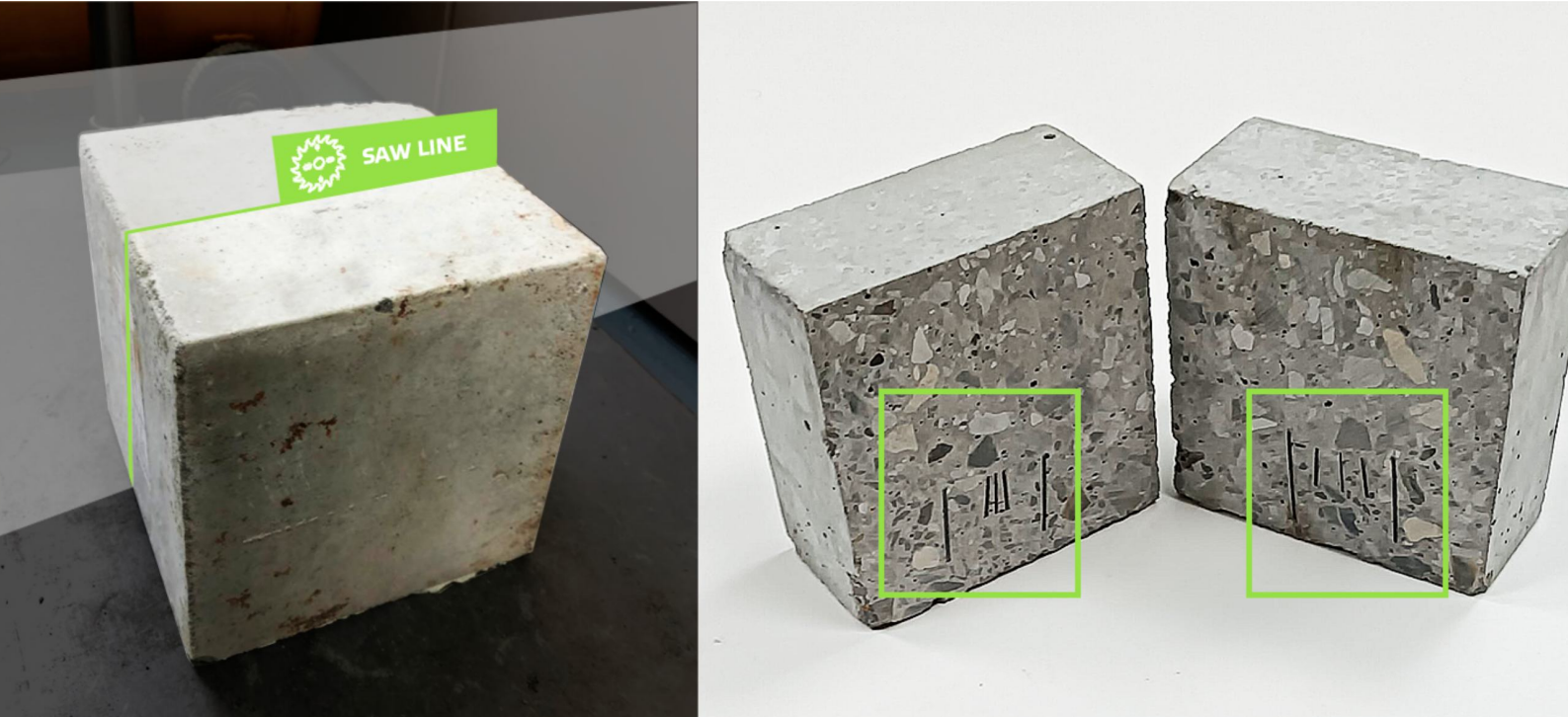


No voids (cavities) confirmation

Demonstrating Concrete Flowability Using Legoplast Plastic Rebar Spacers



In this study, we investigated the castability of the C40 grade concrete (Ordinary Portland Cement) and 20mm aggregate mix when utilizing Legoplast plastic rebar spacers.

Four Type 1 rebar spacers were embedded in concrete cubes composed of a concrete and aggregate mix commonly used for superstructure slabs (C40/20 OPC with 66% GGBS content).

After curing for 28 days, all four cubes were vertically cut and examined. Notably, no voids or cavities were observed either below or above the plastic rebar spacer. This result highlights the ease of concrete penetration around the spacer, even in the presence of 20mm aggregate.

Concrete specification used for experiment:

- Cement Grade: C40
- Aggregate Size: 20mm
- Cement Type: Ordinary Portland Cement (OPC)
- Supplementary Material: 66% Ground Granulated Blast-furnace Slag (GGBS), used specifically for superstructure slabs



Sample # 1



Sample # 2



Sample # 3



Sample # 4

