

Indian Standard

**CODE OF PRACTICE FOR
COMPOSITE CONSTRUCTION**

FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 23 November 1966, after the draft finalized by the Composite *Construction* Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Though composite construction is not a very new technique, its importance in structural construction is of recent realization in this country. With the advancement in the manufacture of structural units, composite construction has assumed great importance. This technique essentially consists in providing the required monolithic action between the prefabricated units, such as steel beams, precast reinforced or prestressed concrete beams and cast *in-situ* concrete and thereby increasing the structural efficiency of the whole section. Prefabricated construction and *cast-in-situ* construction have their own advantages and disadvantages; and composite construction seeks to combine the advantages and minimize the disadvantages of these methods of construction. For example, in the conventional type of steel beam and slab construction, each beam carries the entire load transmitted to it by the slab, but if sufficient shear connection is provided between the beam and the slab, they will act together as a composite section to carry the load and their action will be similar to that of a tee beam. For a given condition, considerably *more* variation in depth of the section is possible with composite construction than with the conventional construction. Composite construction has also the advantages that the prefabricated units can act as formwork for *in-situ* concrete and the units requiring to be transported and erected are lighter than those in case of fully precast and prefabricated construction. In this code, it is attempted to provide a general guidance to designers and field engineers for the design and construction of composite structures. This code may be applied to both dynamically and statically loaded structures.

1. SCOPE

1.1 This standard deals with the design and construction of composite structures made up of prefabricated structural units and cast-in-situ concrete. The prefabricated units may consist of steel members or prestressed or reinforced concrete precast members.