An ANSI/PCI Standard

ANSI/PCI 128-19

SPECIFICATION FOR GLASS-FIBER-REINFORCED CONCRETE PANELS

PCI® Precast/Prestressed Concrete Institute

Approved American National Standard ANSI

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FOREWORD

This standard provides minimum requirements for the design, manufacture, and installation of glass-fiber-reinforced concrete (GFRC) panels. The primary emphasis is on thin-walled alkali-resistant (AR) GFRC architectural cladding panels with a steel-frame support structure made by the spray-up process in controlled factory conditions.

This standard also includes minimum requirements for GFRC panels manufactured using the premix process in controlled factory conditions.

The potential of using GFRC systems was recognized during the developmental work on glass-fiber-reinforced plastics carried out in the 1940s. Early experience indicated that portland cement composites made with unprotected E-glass fiber (conventional glass-fiber reinforcement used in plastics) were subject to alkaline attack. Because of this fact, a special AR glass-fiber product was developed.

Following the successful development of AR glass fibers in the late 1960s, test programs were undertaken to determine the properties of portland cement and AR glass-fiber composites. AR glass fibers have been used in GFRC panels in the United States since the early 1970s.

The PCI GFRC Certification Committee developed this standard. Members of the PCI GFRC Certification Committee Task Group working on this standard were:

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PREFACE

This standard was developed following the protocols required by the PCI Group Operations Manual. The provisions were balloted in the PCI Glass Fiber Reinforced Concrete Panels Committee. Review and comments by the PCI Technical Activities Council (TAC) followed and resulted in substantive changes to the standard. These changes were returned to TAC and accepted. The standard was then submitted to the PCI Standards Committee, where additional review and balloting took place. The membership of that committee is balanced according to the accreditation rules of the American National Standards Institute (ANSI). In addition, a public review period was provided, and public comments were resolved through the PCI Standards Committee. The entire process is a consensus process involving PCI members, nonmembers of PCI, and the general public.

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