ACI 347.3R-13

Guide to Formed Concrete Surfaces

Reported by ACI Committee 347



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First Printing January 2014

Guide to Formed Concrete Surfaces

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Reported by ACI Committee 347

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The primary goal of the construction team is to produce as-cast concrete surfaces that meet project specifications and expectations. Although various descriptions, interpretations, and methods exist to achieve an as-cast concrete surface, no unified definitions of different concrete surfaces exist.

This document defines four quality levels of formed concrete surfaces and provides methods to achieve and evaluate them. These quality levels are identified by three surface finish categories: 1) form facing; 2) concrete surface void ratio; and 3) characteristics of form-facing materials. The basic procedures for classification are defined using tables derived from recommendations of the German Concrete Association (DBV) (Merkblatt Sichtbeton Deutscher Beton- und Bautechnik-Verein e.V. 2004).

This guide assists the project owner, design team, contractor, formwork and concrete suppliers, and all other parties in reaching a more specific understanding of how to produce a more clearly defined as-cast concrete surface. All other parties should understand the procedures, processes, and costs for producing defined surfaces of formed concrete. The guide also discusses all phases of construction relating to concrete surfaces from planning, description of work, and construction through acceptance of a concrete surface.

This guide can be used by both specifier (architect/licensed design professional) and contractor as a supplemental tool for defining, specifying, and evaluating concrete surfaces and offers guidance to the development of concrete surface specifications and expecta-

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tions. Please refer to ACI 303R-12 for information regarding postconstruction treatment of formed concrete surfaces.

This guide also describes an entire process for comprehensive use, including the creation of a concrete surface team and its defined roles and responsibilities in the construction process.

Keywords: color uniformity; exposed to view; form facing; job-built formwork; mockup; offsets; panelized formwork; reference area; surface finish; surface void ratio; texture; tolerances.

CONTENTS

CHAPTER 1—INTRODUCTION, p. 2

CHAPTER 2—DEFINITIONS, p. 2

CHAPTER 3—FORMED CONCRETE SURFACE DESCRIPTIONS, p. 2

3.1—General, p. 2

3.2—Examples and determination of surface void ratio, p. 5

CHAPTER 4-BASICS OF LAYOUT AND DESIGN,

p. 7

- 4.1—General, p. 7
- 4.2-Design and construction recommendations, p. 7
- 4.3—Planning and detailing, p. 8
- 4.4—Formwork and facing selection, p. 9
- 4.5—Premanufactured panelized formwork, p. 11
- 4.6—Job-built formwork, p. 11
- 4.7—Design with form liners, p. 14
- 4.8—Post-construction treated concrete surfaces, p. 14

ACI 347.3R-13 was adopted and published January 2014.

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