

TABLE OF CONTENTS

Figures and Tables	5
Terms and Definitions	7
List of Abbreviations and Symbols	9
1. General	11
1.1 Background	11
1.2 Purpose and Scope	11
2. Design Considerations Impacting Concrete Flow	13
3. Rheology of Tremie Concrete	14
3.1 General	14
3.2 Rheology	15
4. Mix Design	17
4.1 Introduction	17
4.2 Mix Design Considerations	17
4.3 Materials	17
4.4 Proportioning and Production	20
5. Production and Testing of Concrete, including Acceptance Criteria	22
5.1 A New Approach to Specifying Fresh Concrete	22
5.2 Suitability, Conformity and Acceptance Testing	22
5.3 The Influence of Time	22
5.4 Quality Control on the Concrete Manufacturing Process	23
6. Execution	24
6.1 General	24
6.2 Prior to Concreting	24
6.3 Tremie Pipe and Hopper	25
6.4 Tremie Spacing	26
6.5 Initial Concrete Placement	26
6.6 Tremie Embedment	27
6.7 Concrete Flow Patterns	27
6.8 Flow Around Reinforcement and Box-Outs	29
6.9 Concreting Records	29
7. Full Scale Trials	30
8. Quality Control of Completed Works	31
8.1 General	31
8.2 Post-Construction Testing Methods	31



TABLE OF CONTENTS CONT.

Appendix A	Test Methods to Characterise Fresh Concrete	32
Appendix B	Initial Recommendations on Acceptance Criteria for Selected Test Methods	37
Appendix C	Use of Additions Concepts	39
Appendix D	Methods for Testing Completed Works	41
Appendix E	Interpretation of Anomalies	42
Appendix F	Detailed Information on Design Considerations	45
References		50

The contents of this guide reflect the views of the authors, who are responsible for the facts and accuracy of the data presented herein. This guide does not constitute a standard, specification or regulation.