

CONTENTS

Chapter 1. Overview of R&D Project	1
Section 1 Purpose and Necessity	1
Section 2 Definitions, Scope, and Characteristics	5
Chapter 2. Domestic and Foreign Technology Development Status	23
Section 1 Domestic and Foreign Research Trends	23
Section 2 Domestic and Foreign Technology Patent Trends	28
Chapter 3. Research Contents and Achievements	31
Section 1 Research Stage	31
Section 2 High-strength Concrete Production Technology	32
Section 3 Development of various new type pile and connection technology	33
Section 4 Improved Girder-Abutment Joint Detail	81
Section 5 Prediction of Behavior during Pre-Tension Member Construction	94
Section 6 Tests on the prototype performance	116
Chapter 4. Goal Achievement and Contribution to Related Fields	177
Section 1 Goal Achievement	177
Section 2 Contribution to related fields	179
Chapter 5. Utilization Plan of R & D achievement	190
Section 1 R & D Achievement Utilization Plan	190
Section 2 Expectations and Impacts of Research	192
Chapter 6. Security rating of R & D achievement	195
Chapter 7. Research facilities and equipment	195
Chapter 8. Performance of Safety Action in Laboratories	196
Section 1 Laboratory Safety Action Implementation Plan	196