

New bridge expansion joint system

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Preface

Today, one of the most fundamental pillars of sustainable development of urban improvement and development of major communication networks, including highways, urban arteries and bridges are. The ride between the bridges on the city as the most effective provider networks link the characteristics that are most valuable in the construction and maintenance they should pay particular attention to the course in our country are under consideration. Well, including cases where construction of bridges in urban roadway are required to pay special attention to detail design and proper component systems that bridge expansion joints if not in manufacturing, installing and maintaining them could seriously damage the quality and sometimes compensation structure Bridge traffic flowing into and to disrupt the route.

Based on reviews and technical reviews conducted by the bridge in Tehran, the expansion joint system performance based on ability to shift materials such as steel plates covering the surface of a metal chassis (metal angles), use only reinforced elastomeric rubber by expansion joints, combined with two recent methods or systems, metal comb (for large expansion joints or mechanical) is based on these methods have many disadvantages that can't as an expansion joint system performance is required. Lack the necessary strength against loads caused by passing vehicles, up sheet disruption deck of vibration, distortion longitudinal plate, separation angles of the concrete deck, a simple system of rigid sheets and angles, no heel protection methods mentioned in the implementation and expansion joints Above all Bbnd absence of water and cement and the possibility of entering the expansion joint space during the operation which was led above the usual methods of performance and durability and The useful life is very small.

Unfortunately, despite numerous flaws mentioned systems, not all companies are consulting engineers and contractors who build bridges, non-efficient methods above are offered to employers that lead to getting into too much damage to structures and bridges have been major factors in rising costs maintenance is. In this regard the use of new methods of expansion joint systems run on a concrete bridge in order to improve their quality level and also benefiting from domestic capabilities with valuable practical experience obtained during the operation and Experimental observations performed including categories that are placed on the agenda and thus to prepare and instructions are available.

The executable instructions ۱۲ different tracks in renovation and reconstruction of sections of the expansion joint system to ۱۰ cm in size (small expansion joints by EXJ-S) for roadway and pedestrian paths in concrete bridges based on the type of rubber expansion joints provide domestic production Is presented.

No doubt that the defects may exist in the eyes of instructions vigilance experts and professionals and scholars will not be covered and certainly our own guidance and constructive Guidance will benefit. It is hoped that the present publication the first codification of Tehran Municipality has the appropriate way to implement decoding of expansion joint systems and They'r long lasting.

At the end of all the efforts of respected friends and colleagues in the preparation and printing of this book have sincere cooperation is appreciated and thanks.

Contant

Section I - introducing various systems and look at the expansion joints on the current condition

Chapter One - Overview of the plans a small expansion joint systems in developed countries
Chapter Two - study of quality systems in the small expansion joints in Tehran

Section II - Executive Details stages of expansion joints in bridges Concrete Systems

Chapter Three - General Methods and types of expansion joint systems

Chapter Four - Executive Detail step by step approach EXJ - TYPE ١

Chapter Five - Executive Detail step by step approach EXJ - TYPE ٢

Chapter Six - Executive Detail step by step approach EXJ - TYPE ٣

Chapter Seven - Executive detailed step by step approach EXJ - TYPE ٤

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Chapter Twelve - Executive detailed step by step approach EXJ - TYPE ٩

Chapter Thirteen - details step by step approach Executive EXJ - TYPE ١٠

Chapter Fourteen - details step by step approach Executive EXJ - TYPE ١١

Chapter Fifteen - details step by step approach Executive EXJ - TYPE ١٢

Section III – Appendices

Appendix A (epoxy based repair mortar

Appendix B (adhesive to bind concrete or epoxy Grout Bolt

Annex C (mastic g + fine and elastic protective cover concrete

Annex D (flexible epoxy based mortar

Appendix E (epoxy based primer

Annex F (Technical rod bolts

Appendix G (Khdtrakm base cement mortar with special fibers and high strength
Appendix H (water curtain for Rubber
Annex K (roadway expansion joint rubber
Annex M (rubber sidewalk expansion joints
Appendix N (Bolt Technical pods and accessories
Annex P (Vault prefabricated rubber
Annex Q (protective steel frame prefabricated
References