

Author's Accepted Manuscript

A review on application of structural adhesives in concrete and steel–concrete composite and factors influencing the performance of composite connections

Pankaj Kumar, Amar Patnaik, Sandeep Chaudhary



PII: S0143-7496(17)30059-3
DOI: <http://dx.doi.org/10.1016/j.ijadhadh.2017.03.009>
Reference: JAAD1989

To appear in: *International Journal of Adhesion and Adhesives*

Received date: 18 June 2016
Accepted date: 6 March 2017

Cite this article as: Pankaj Kumar, Amar Patnaik and Sandeep Chaudhary, A review on application of structural adhesives in concrete and steel–concrete composite and factors influencing the performance of composite connections *International Journal of Adhesion and Adhesives* <http://dx.doi.org/10.1016/j.ijadhadh.2017.03.009>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and a review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain

A review on application of structural adhesives in concrete and steel–concrete composite and factors influencing the performance of composite connections

Pankaj Kumar^a, Amar Patnaik^b, Sandeep Chaudhary^{a*}

^aDepartment of Civil Engineering, MNIT Jaipur, Jaipur-302017, India

^bDepartment of Mechanical Engineering, MNIT Jaipur, Jaipur-302017, India

*Corresponding Author: Dr. Sandeep Chaudhary, Tel.: +91-94144-75375. E-mail: sandeep.nitjaipur@gmail.com

Abstract

This paper chronicles the use of structural adhesives in civil engineering construction since its inception. The usage of structural adhesives as effective and popular strengthening agents has been discussed. The application of structural adhesives as connecting agents, especially in cases of steel–concrete composites has also been discussed in detail. Various factors influence the bond strength of interfaces, such as the physical, mechanical and chemical properties of structural adhesives and adherends, the shape of adherends, water immersion, adhesive layer thickness, bonded area geometry, relative humidity and temperature of the environment during curing and service life, the amount and type of fillers and surface finishing of adherends.

Keywords: structural adhesive; steel; concrete; composite; shear strength.

Download English Version:

<https://daneshyari.com/en/article/5014699>

Download Persian Version:

<https://daneshyari.com/article/5014699>

[Daneshyari.com](https://daneshyari.com)