

SELF-COLLAPSE CONCRETE CONSTRUCTION

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Abstract

This in the article self-restorative of concrete features seeing is released. Self-restorative of concrete features described, this of the material advantages and disadvantages, as well as under construction use shown.

Keywords: self-treatment; concrete; construction materials; healing process; cracks; mechanism; repair.

Introduction

Concrete word from the Latin word "concretus" come came out is condensed and for stiff The rest . From cement the most ancient use ten two million years before , on concrete similar construction from materials early use from BC 6500 years ago right However , he is from Rome . of the empire next until the period concrete as unformed .

Revolutionary although modern concrete (lime) based on) known one structure work the deadline reducing cracks appearance to be as a result short for life has . Many researchers other many things in line better to endurance achieve for concrete to improve movement They did it . By themselves. renewable concrete concept to concrete how road finds . This kind of concrete working on the way out two main research direction hydrates are present time to pass with cracks close natural method and human intervention demand to do cracks close artificial method . Such of the work main purpose of concrete endurance is to increase , this to the environment both to the economy also big positive impact shows .

Other from the side , it is new design methods coercion through architecture projects improve and that's why for internal of places shape change possible , then it will be many functions will do and flexibility provides .

Self-esteem restorative concrete how works

Self-esteem healing concrete is concrete constructions on the surface appearance to be cracks treatment for biological limestone working releasing healer bacteria mixing through working removable concrete type .

Only chosen some bacteria types healer limestone working release possible , for example , the genus Bacillus , calcium known as lactate to calcium based feed article , as well as nitrogen and phosphorus concrete working in the release concrete ingredients with mixed . These oath drinking bacteria types 200 years in concrete more than to live possible . However , self- healing concrete concrete of the element injury or rupture if it cures and water through it flowing come out If it starts , bacteria spores water and feed substances with communication when activates .

This activated bacteria on concrete there is was calcium lactate with feed Bacteria oxygen consumption that he did due to , soluble calcium lactate insoluble to limestone Limestone atmosphere with communication when hardens and this with him/her seals . Calcium lactate to limestone bacterial rotation during of steel corrosion in the process which was the main element oxygen consumption to do additional has advantages . This bacterial activity all oxygen consumption that he did because it is reinforced concrete of constructions far life to see increases . Self- restorative concrete working in the release two bacterial tool used : bacterial spores and calcium Tata -based varnish feed substances to concrete separately mud pallets as is entered . This mud trays concrete from cracking before bacterial tool active that it will not be This only provides concrete cracked , cracks granules when opening and incoming water calcium lactate bacteria with communication when are activated , they activates . Self- healing concrete this process for successful test bacteria fast sprout output and increase Bacterial tool in the laboratory seven day inside feed substances to limestone But the external in case this one how many week continue to be able possible [1].

Self-esteem restorative of concrete advantages

- * Self-made renewable concrete no how external processing without giving spontaneously renewable repair to receive possible .
- * Simple concrete with Compared to , it is better squeeze and bending to the power has .
- * He is good. freeze-thaw against has .
- * Self- restorative of concrete low permeability .
- * Corrosion main reason was spontaneously renewable cracks repair as of steel corrosion reduce .

* Self- restorative on concrete this on concrete used bacteria , Bacillus bacteria like , human life for harmless and that's why for from them effective use possible .

Self-esteem restorative of concrete disadvantages

* Bacteria to increase various kind environment conditions impact to do possible

* In concrete interfering mud trays concrete size almost 20 percent covers and this cutting zone or on concrete fracture to the zone rotation possible .

Table 1 Simple concrete and self-restorative of concrete comparative features

Feature name	Simple concrete	Spontaneous renewable concrete
Cracks harvest to be	Yes	Yes , but temporarily
Service deadline	100 years	200 years
Density	2500 kg/m ³	Many not been 1800 kg/m ³
Compression power	B15	B25
This is work . power	Btb6.8	Btb8
Again restoration ability	no	yes

So so, traditional to concrete relatively self restorative from concrete of use advantage clear This is shown . this of the material development beginning that into account let's take , construction industry various kind construction materials develop in the field very big to opportunities has.

Self-esteem restorative concrete information analysis new technique current to grow to the future has and in use more efficient said to the conclusion our arrival possible . SVB, especially bridges and all road facilities for very suitable comes because they often heavy loads because of small to the cracks face they come and permanent accordingly technician service to show need . This kind of from concrete use technician service show expenses noticeable at the level reduces and security increases , therefore for his/her many advantages because of use recommendation is [2].

All large buildings this kind of from concrete from use benefit sees , just like that infrastructure security and endurance with will improve .

Conclusion

Self-esteem restorative concrete is fast meanwhile industry under construction revolution to do possible was The material is traditional . abiotic from reinforced

concrete one how many in the fields is superior . Undoubtedly , traditional concrete one how many to the reasons according to far term to stability has not . Simple of concrete work deadline short , gets worse or one how many ten years inside replacement need . Self- healing concrete traditional to concrete than much far continue because he is human without interference water because of to the surface arrived cracks treatment possible . From this except for standard concrete working release expensive and him/her effective again work possible no , this his/her economic both in terms of ecology also stable that it is not This material is self- explanatory . recovery possibility because of it , it is less concrete demand does , therefore for far within the period construction expenses saves and traditional concrete constructions break with related waste reduces .

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