INVENTIONS IN BACHELOR OF TECHNOLOGY BUILDING AND CONSTRUCTION

ENGLISH

Over the past three years of my academic journey at Dedan Kimathi University of Technology where I've been pursuing a Bachelor of technology in Building Construction,my passion for enhancing structural integrity has grown exponentially .This journey has been fueled by a persistent desire to contribute to advancements in construction materials and techniques .One particular avenue of exploration that has captured my curiosity revolves around the integration of aramid fibers into gypsum plaster ,with the aim of significantly improving its strength ,durability ,and fire resistance . The envisioned outcome of this innovation is the creation of a high performance building material that not only meets but surpasses industry standards , offering enhanced safety and structural industry across a diverse range of applications.The initial spark for the innovation arose from a deep-seated curiosity about the potential synergies between aramid fibers and gypsum plaster .Aramid fibers ,known for their exceptional strength ,heat resistance , and durability,seemed to hold untapped potential for elevating the performance of traditional construction materials . The concept aligns with the ever-growing need within the construction industry for materials that not only meet basic requirements but also exceed expectations in terms of safety ,longevity ,and resilience . The core concept revolves the strategic incorporation of aramid fibers into gypsum plaster .By carefully blending these materials ,we aim to create a composite that not only maintains the workability and application characteristics of gypsum plaster but also imports enhanced structural attributes .The envisioned benefits include heightened tensile strength ,improved resistance to physical wear and tear,and an unprecedented level of fire resistance.

KISWAHILI

Kwa muda wa miaka mitatu iliyopita ya safari yangu ya masomo katika Chuo kikuu cha Teknolojia cha Dedan Kimathi,ambapo nimekuwa nikifuatilia shahada ya kwanza ya Teknolojia katika Ujenzi wa Majengo ,shauku yangu ya kuimalisha uandilifu wa muundo imeongezeka kwa kasi.Safari hii imechochewa na hamu ya kudumu ya kuchangia maendeleo katika vifaa na mbinu za ujenzi.Njia moja mahususi ya uchunguzi ambayo imenasa udadisi wangu inahusu kuunganisha nyuzi za aramid kwenye plasta ya jasi ,kwa lengo la kuboresha kwa kiasi kikubwa uimara wake,na upinzani wa moto.Matokeo yanayotarajiwa ya ubunifu huu ni uundaji wa nyenzo ya ujenzi ya utendakazi wa juu ambayo sio tu inakidhi bali inapita viwango vya sekta ,ikitoa usalama ulioimarishwa na uadilifu wa muundo katika anuwai ya matumizi.Cheche ya awali ya uvumbuzi huu iliibuka kutoka kwa udadisi wa kina juu ya maingiliano yanayoweza kutokea kati ya nyuzi za aramid na plasta ya jasi.Nyuzi za aramid,zinazojulikana kwa nguvu zao za kipekee ,upinzani wa joto ,na uimara,zilionekana kushikilia uwezo ambao haujatumiwa wa kuinua utendakazi wa vifaavya jadi vya ujenzi.Dhana hii inawiana na hitaji linaloongezeka kila mara ndani ya tasnia ya ujenzi kwa vifaa ambavyo sio tu vinakidhi mahitaji ya kimsingi lakini pia huzidi matarajio katika suala la usalama ,maisha marefu,na ustahimilivu .Dhana ya msingi inahusisha ujumuishaji wa kimkakati wa nyuzi za aramid kwenye plasta ya jasi.Kwa kuchanganya nyenzo hizi kwa uangalifu ,tunalenga kuunda mchanganyiko ambao sio tu hudumisha utendakazi na sifa za utumizi wa plasta ya jasi lakini pia hutoa sifa za kimuundo zilizomarishwa.Faida zinazotarajiwa ni pamoja na kuongezeka kwa nguvu za mkazo,kuimarika kwa upinzani dhidi ya uchakavu wa kimwili,na kiwango kisichokuwa na kifani cha upinzani dhidi ya moto.

KIKUYU

Miaka iyo itatu mihituku ndi githomo-ini kia Dedan Kimathi University of Technology ,kuria ngoretwo ngiruta githomo kia Bachelor of Tecnology in Building Construction ,wendi wakwa wa kurugamirira miako ni wongererekete muno.Rugendo ruu rukoretwo rugitongorio ni wendi munene wa guteithiriria hari guthondeka plasta ,niguo ikoruo na hinya makiria ,ituure ihinda iraya ,na ihote kuhoreria mwaki.Kihumo kia ugaruruki uyu ni guthondeka indo cia gwaka iri na uguni munene iria itangihingia tu ithondeketwo uria kwagirire,na igakoruo na ugitiri na ugima mwega wa miako kundu kuingi.Kiambiriria-ini kiambiriria kiu kieru kiambiririe na wendi munene wa kumenya uria indo iria ithondeketwo na aramati atarii.Mithaiga ya aramide,iri iiikaine ni undu wa hinya wayo wa gutuura ,ni yonekaga iri na uhoti munene muno wa guteithia miaka ya nduire.Undu ucio ni uratwarana na mabataro ma indo cia gwaka,iria itangihingia tu mabataro ma muthingi,no ningi ikoragwo na ugitiri,ituure ihinda iraya,ikoruo itari na ugwati.Kugerera guthondeka indo ingi iria itangihuthika o uguo tu,na ikoragwo na mibango miega makiria.Moimiririo maria merigiriiruo ni hamwe na hinya munene wa kugucia,kuumiriria gwikika uuru,na ukiriririria munene.