

# Our Capabilities

Muhammad Hadi  
University of Wollongong

# Light House



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AUSTRALIA



# Light House



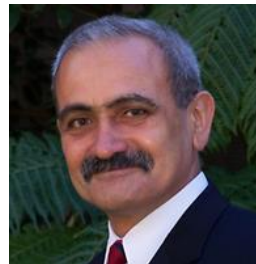
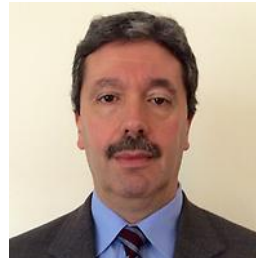
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# Our Team

## Structural Engineering

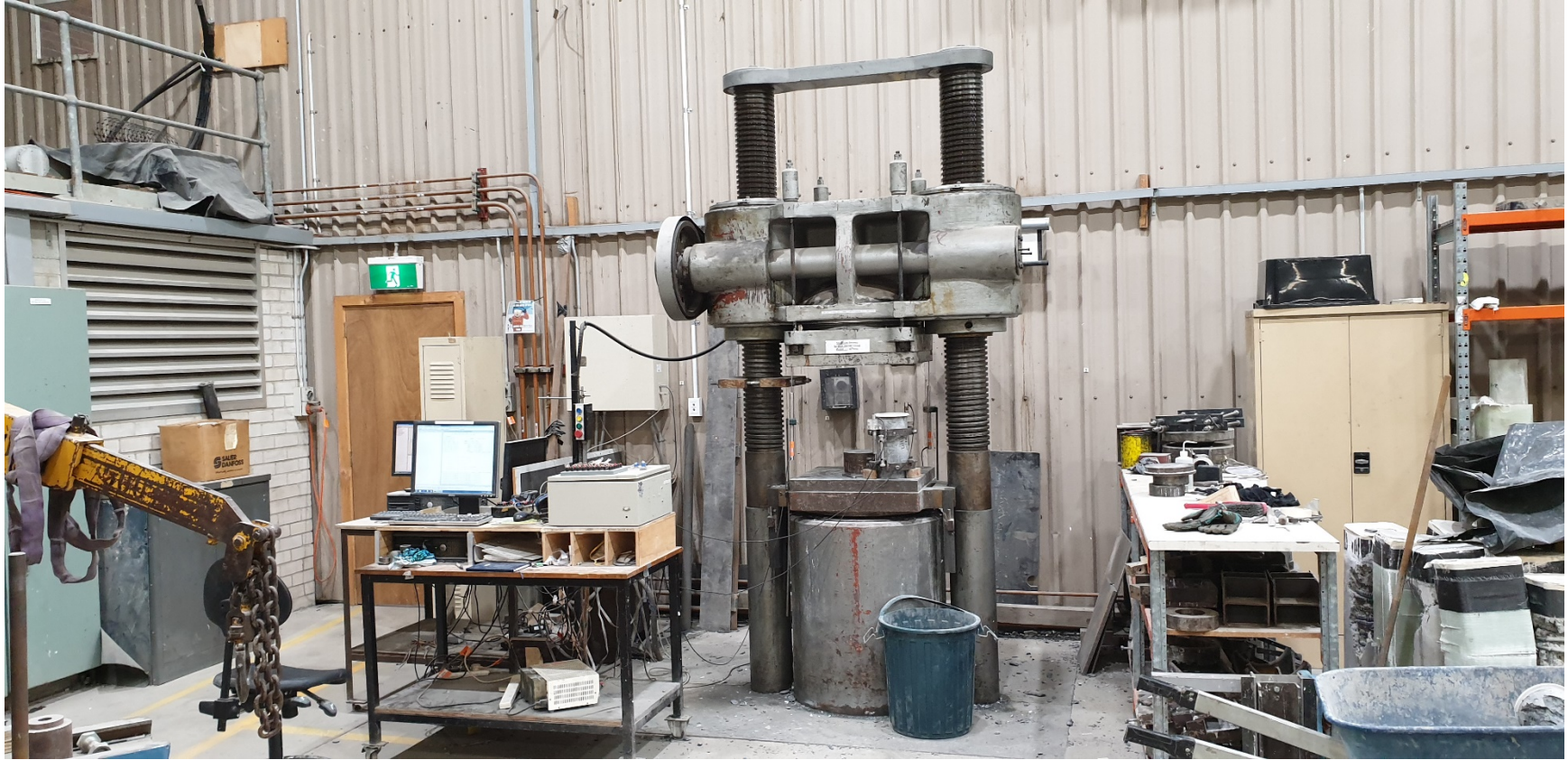
- Alex Reminnokov
- Neaz Sheikh
- Lip Teh
- Aziz Ahmed
- Tim McCarthy
- Muhammad Hadi



# Technical Staff



# 5000 kN testing machine



# Technical officers ability



# Testing Specimens





# Instron lab



# *A new 10 by 10 m square strong floor (2010)*

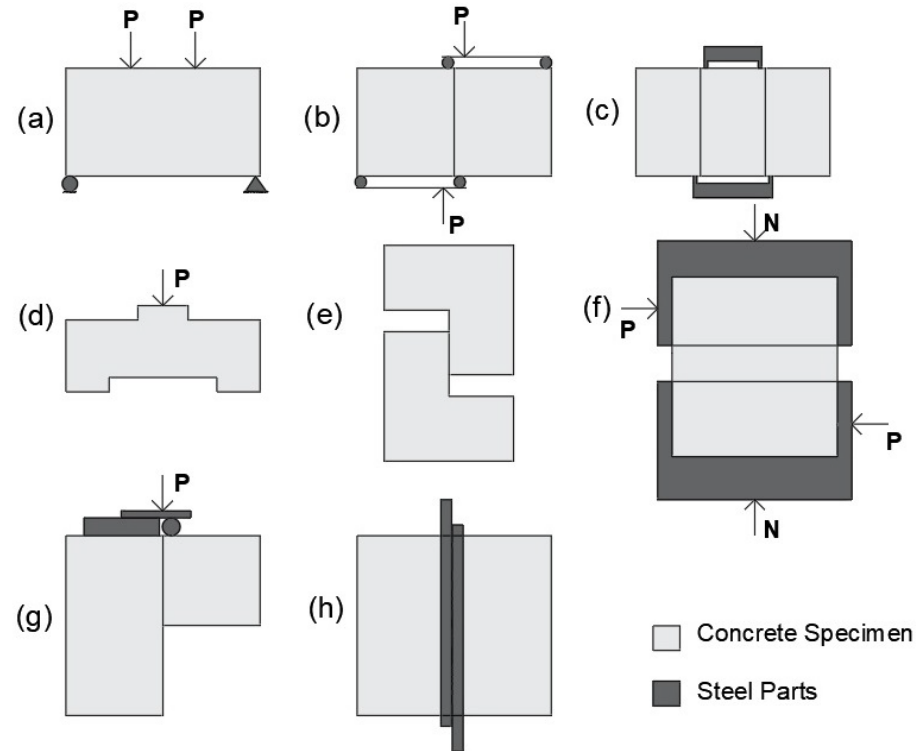


# August 2019

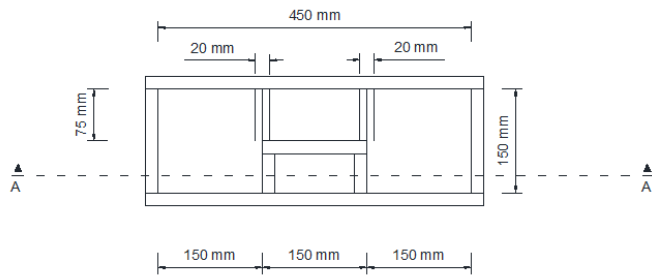


# Shear Strength of Concrete

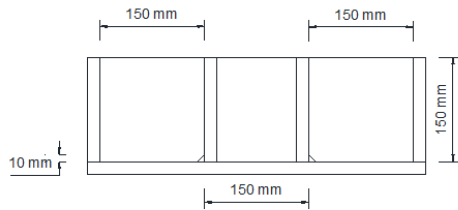
M.N.S. Hadi, U. Sajjad,  
M.N. Sheikh, Simple Test  
Method for Determining the  
Shear Strength of Concrete,  
ACI Materials Journal  
119(1) (2022) DOI:  
10.14359/51732986.



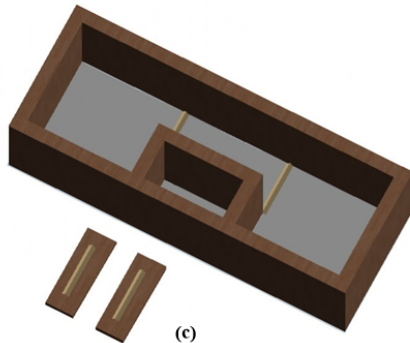
# A new proposed method to determine the shear strength of concrete



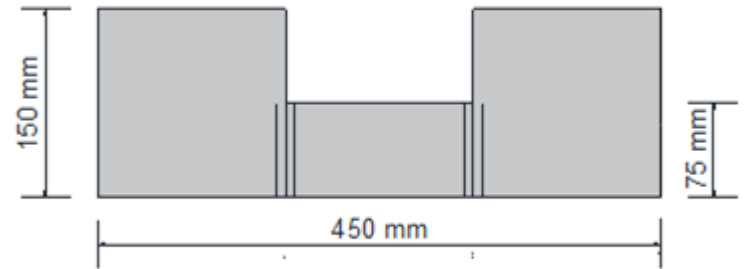
(a)



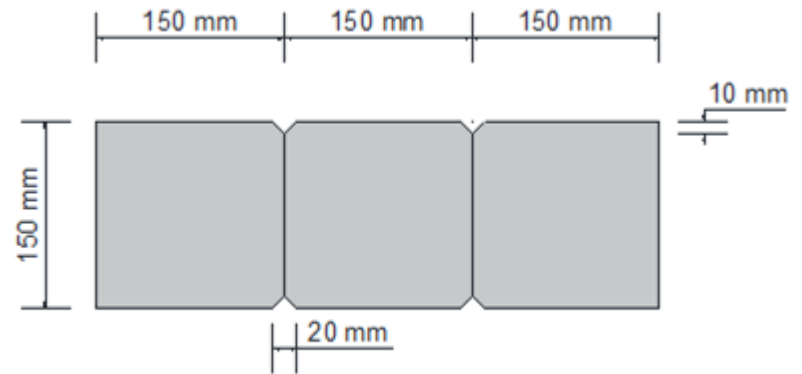
(b)



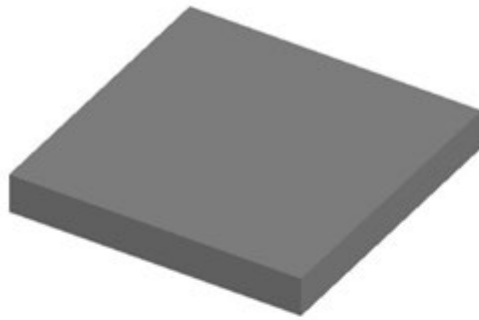
(c)



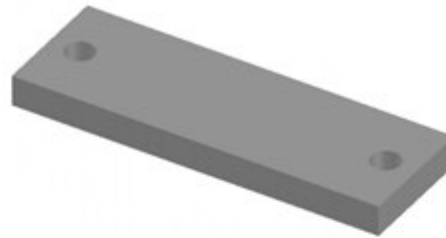
(a)



(b)



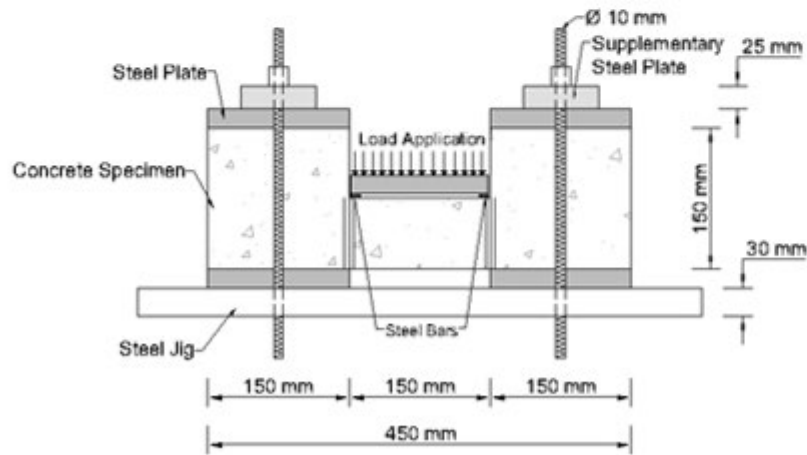
(a)



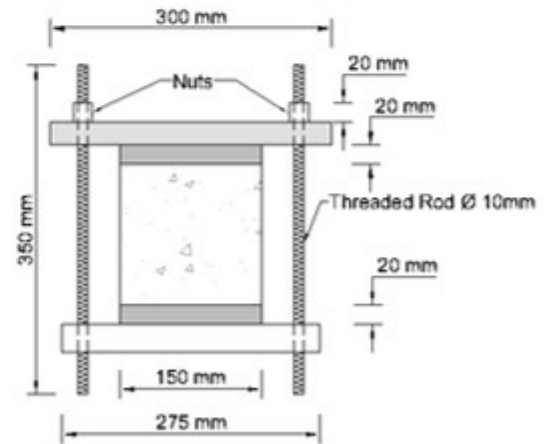
(b)



(c)



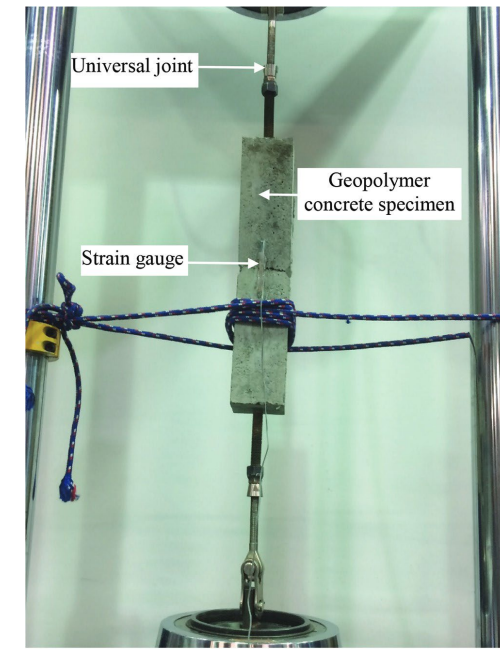
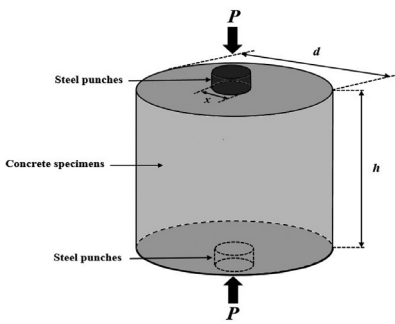
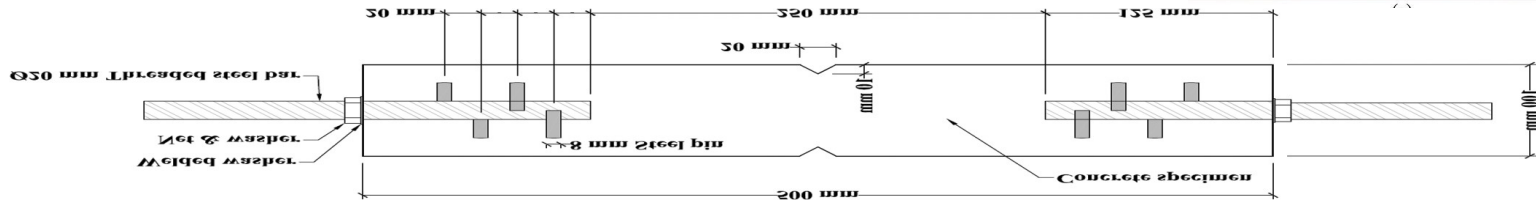
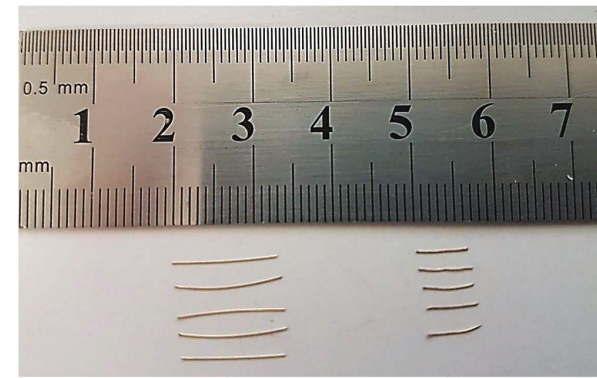
(d)



(e)



# Use of steel fibres in geopolymer concrete

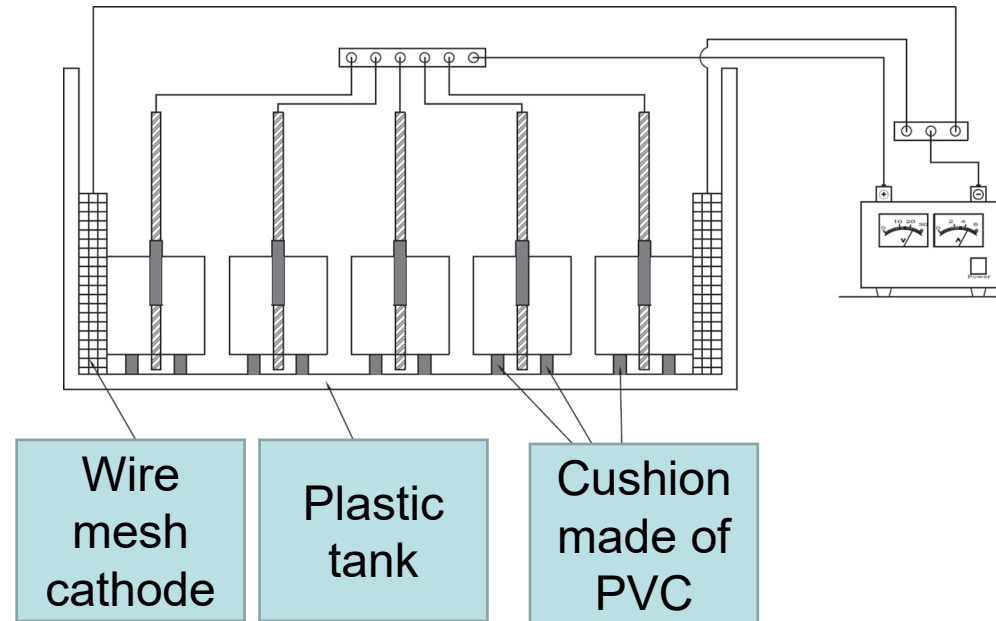
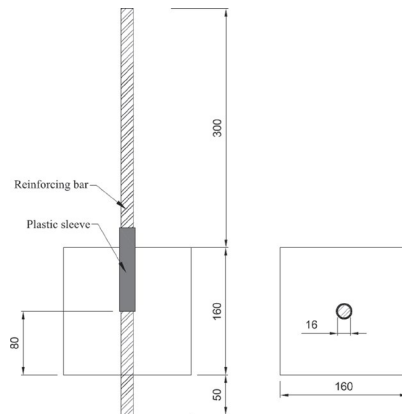
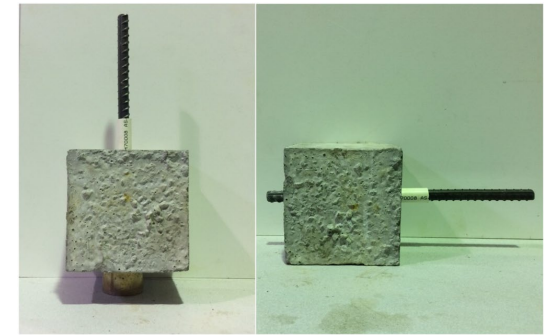


Farhan, NA, Sheikh, MN and Hadi, MNS. (2020). Effect of Steel Fiber on the Engineering Properties of Geopolymer Concrete. *ACI Materials Journal*. MS No. M-2018-353.R1. Vol. 117, No. 3, May 2020. doi: 10.14359/51724591. 12 pages. Pages 29-40.

Farhan, NA, Sheikh, MN and Hadi, MNS. (2018). Engineering Properties of Ambient Cured Alkali-Activated Slag-Fly Ash Concrete Reinforced with Different Types of Steel Fiber. *ASCE Journal of Materials in Civil Engineering*. Vol. 30, no.7, 04018142, 12 pages. DOI: 10.1061/(ASCE)MT.1943-5533.0002333

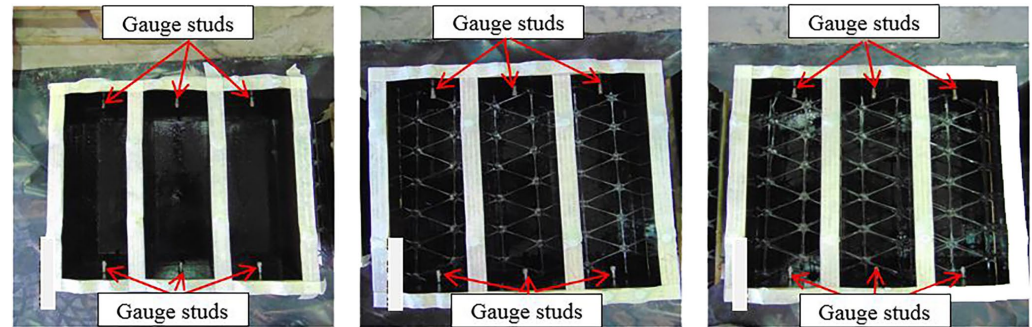
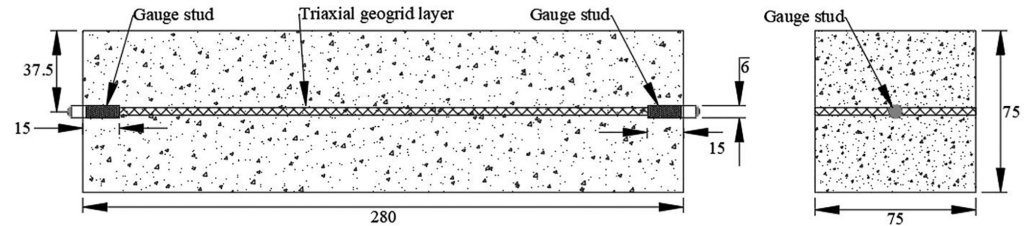
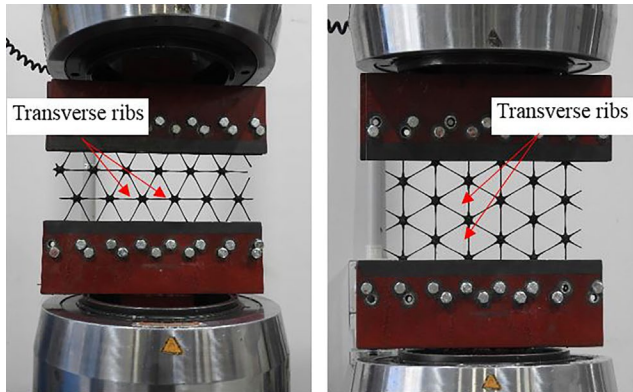


# Bond between geopolymer concrete and steel bars (Accelerated corrosion test)



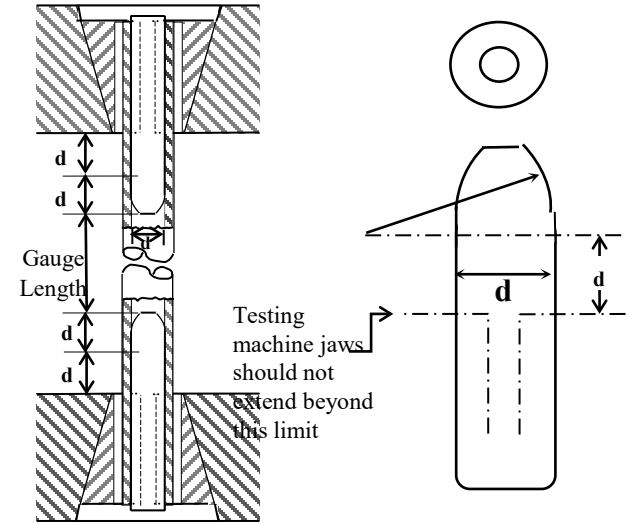
Farhan, NA, Sheikh, MN and Hadi, MNS. (2018). Experimental Investigation on the Effect of Corrosion on the Bond between Reinforcing Steel Bars and Fibre Reinforced Geopolymer Concrete. *Structures*. 14, pp. 251-261.

# Use of geogrids in geopolymer concrete



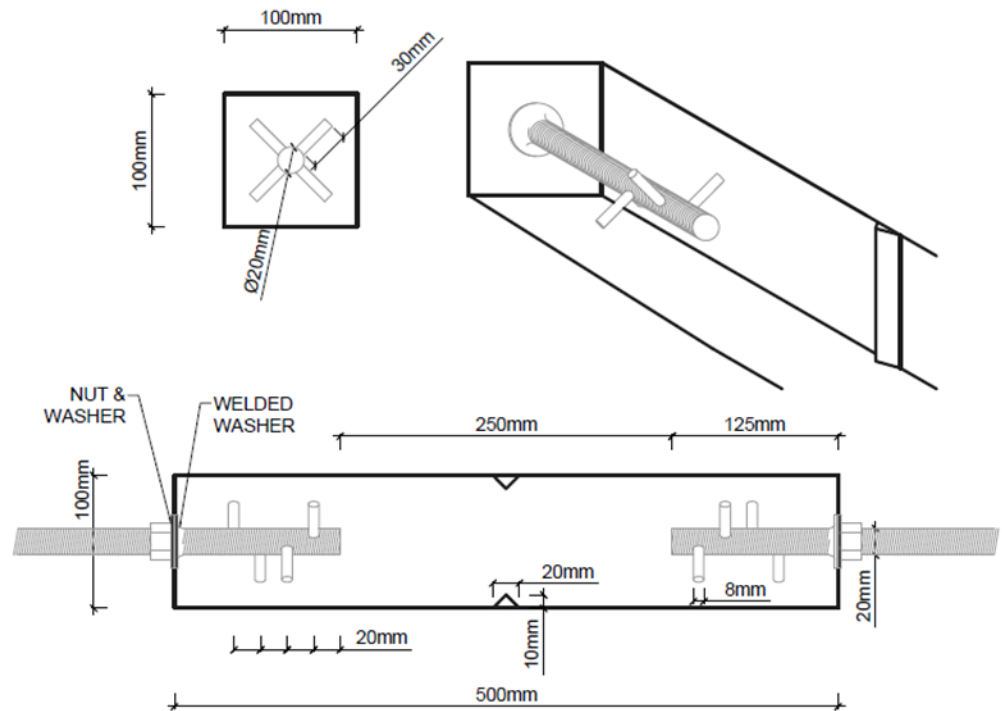
Farhan, NA, Sheikh, MN and Hadi, MNS. (2018). Behavior of Ambient Cured Geopolymer Concrete Columns under Different Loads. *ACI Structural Journal*. Vol. 115, No. 5, Sept 2018.

Al-Hedad, ASA, Farhan, NA, Zhang, M, Sheikh, MN and Hadi, MNS. (2020). Effect of Geogrid Reinforcement on the Drying Shrinkage and Thermal Expansion of Geopolymer Concrete. *Structural Concrete*. 2020, 21(3), pp. 1029–1039. DOI: 10.1002/suco.201900299.



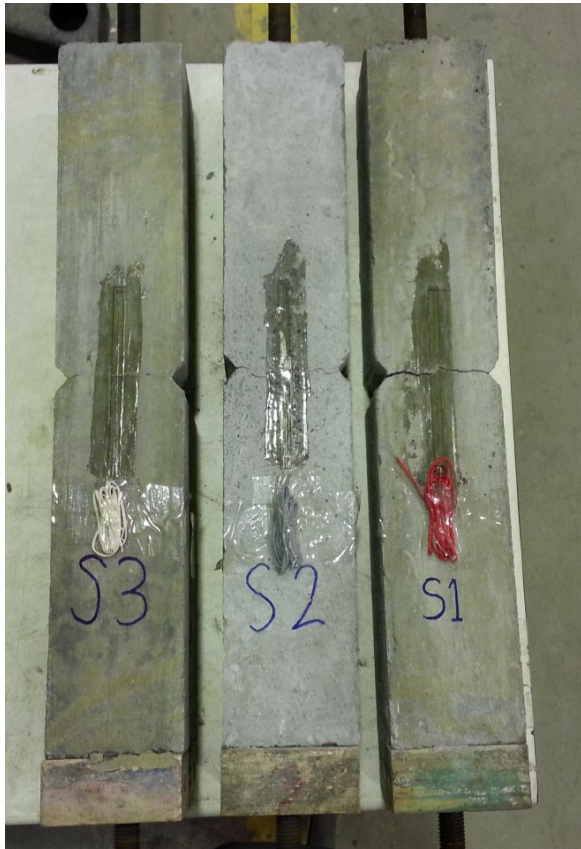
Hadi, MNS, Alhussainy, F, Sheikh, MN. (2017). Behavior of self-compacting concrete columns reinforced longitudinally with steel tubes. *Journal of Structural Engineering, ASCE*. 143 (6), 04017024

# Tensile Stress-Strain Testing of SCC



Details of direct tensile test for SCC

# Tensile Stress-Strain Testing of SCC



Thank you