adhesive to the NC. Additionally, the highest bonding strength gives the pure shear strength between PC and NC, vice versa. However, PC GPOFA to NC bond substrate improved about 57% of bonding strength as compared to PC UPOFA to NC bond substrate.

![Figure 7](image-url)

**Figure 7** Adhesive bond failure envelope using Mohr-Coulomb theory (a) PC CaCO₃-NC (b) PC GPOF-NC (c) PC Sand-NC (d) PC UPOFA-NC

### 4.0 CONCLUSION

The following conclusions have been drawn from the present study:

1. PC CaCO₃ to NC bond substrate had superior bond strength as compared to others. But, the NC to PC GPOFA and NC to PC sand had comparable bond. And, the NC to PC UPOFA had worst bond strength. However, PC GPOFA to NC bond substrate improved about 57% of bonding strength as compared to PC UPOFA to NC bond substrate.
2. PC incorporating palm oil fuel ash was improved the bonding to normal concrete. However, only PC incorporating ground POFA was improved the bonding as compared to PC incorporating unground POFA.
3. The bonding strength was influenced by the pure shear strength. The highest bonding strength gives the highest pure shear strength.
4. Pure shear strength was found in this study indicates that PC had self-adhesive to NC at the critical bonding condition.

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### References


