Chapter V

Conclusions

From the study of strengthening of hydroxyapatite by glazing with calcium phosphate glass, that the conclusion could be drawn as follows:

1. The maximum compressive strength and flexural strength of HAp specimens from extrusion process 188±23 MPa and 27±5 MPa, respectively.

2. The flexural strength of coated HAp (coated with C4, C5, and C6) without annealing had increased to about 3.7 %, 7.4 %, and 18.5%, respectively. This was caused by the filling of molten glass in the pore of sintered HAp at interface and thickness of coated layer was appropriate to induce compressive surface stress.

3. The strength of coated HAp under annealing was unsatisfactory due to :

- Unable to control thickness of coating.
- Microcrack appeared on the coated specimens during dipping process.
- Annealing eliminated stress of coating layer that it did not induce compressive surface stress.