

Appendix F

Comparison of Mechanical Properties of Wood by Using Program SPSS 10 for Windows

Table F-1 Result of T-Test calculated by using program SPSS.

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---------------|------------------------------|--------|----|----------------|--------------------|
| Pair 1 | Su_Shear strength | 13.4 | 20 | 1.44 | 0.32 |
| | Ra_Shear strength | 15.3 | 20 | 1.23 | 0.28 |
| Pair 2 | Su_Compression parallel | 37.1 | 20 | 2.14 | 0.48 |
| | Ra_Compression parallel | 52.6 | 20 | 4.21 | 0.94 |
| Pair 3 | Su_Compression perpendicular | 1.9 | 20 | 0.29 | 0.06 |
| | Ra_Compression perpendicular | 2.1 | 20 | 0.20 | 0.04 |
| Pair 4 | Su_Hardness | 4259.0 | 20 | 570.34 | 127.53 |
| | Ra_Hardness | 4890.1 | 20 | 481.81 | 107.74 |
| Pair 5 | Su_MOR | 91.4 | 20 | 7.85 | 1.75 |
| | Ra_MOR | 107.6 | 20 | 10.84 | 2.42 |
| Pair 6 | Su_MOE | 7387.6 | 20 | 1134.80 | 253.75 |
| | Ra_MOE | 9684.9 | 20 | 1545.16 | 345.51 |

Table F-2 Result of Paired Samples Correlations calculated by using program SPSS.

| | | N | Correlation | Sig. |
|---------------|---|----|-------------|-------|
| Pair 1 | Su_Shear strength & Ra_Shear strength | 20 | -0.050 | 0.833 |
| Pair 2 | Su_Compression parallel & Ra_Compression parallel | 20 | 0.020 | 0.932 |
| Pair 3 | Su_Compression perpendicular & Ra_Compression perpendicular | 20 | 0.096 | 0.686 |
| Pair 4 | Su_Hardness & Ra_Hardness | 20 | 0.053 | 0.823 |
| Pair 5 | Su_MOR & Ra_MOR | 20 | -0.013 | 0.957 |
| Pair 6 | Su_MOE & Ra_MOE | 20 | -0.265 | 0.258 |

Table F-2 Result of Paired Samples Test calculated by using program SPSS at 95% confidence.

| | | Paired Difference | | | | | t | df | Sig. (2-tailed) |
|---------------|--|-------------------|-------------------|--------------------|--|----------|--------|----|--------------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Su_Shear strength - Ra_Shear strength | -1.89 | 1.94 | 0.43 | -2.80 | -0.98 | -4.35 | 19 | 0.000 |
| Pair 2 | Su_Compression parallel -Ra_Compression parallel | -15.55 | 4.68 | 1.05 | -17.74 | -13.36 | -14.85 | 19 | 0.000 |
| Pair 3 | Su_Compression perpendicular - Ra_ Compression perpendicular | -0.17 | 0.33 | 0.07 | -0.32 | -0.01 | -2.23 | 19 | 0.038 |
| Pair 4 | Su_Hardness - Ra_Hardness | -631.06 | 726.73 | 162.50 | -971.18 | -290.94 | -3.88 | 19 | 0.001 |
| Pair 5 | Su_MOR - Ra_MOR | -16.22 | 13.46 | 3.01 | -22.52 | -9.92 | -5.39 | 19 | 0.000 |
| Pair 6 | Su_MOE - Ra_MOE | -2297.24 | 2146.12 | 479.89 | -3301.66 | -1292.82 | -4.79 | 19 | 0.000 |

Note : Su = Superheated Steam Dried Wood

Ra = Conventional Dried Wood (from Rattapoom Parawood Factory)