

TMS Bladesmithing Competition Judging Rubric

| Report (maximum length 10 pages) 40% | | |
|--|-------|----------|
| Report Content | Score | Comments |
| Historical background | /5 | |
| Discussion on safety procedures | /5 | |
| Final blade shown in the report | /5 | |
| Artisan acknowledged (if applicable) | /5 | |
| Scientific Merit | | |
| Blade material: source and choice of material clearly stated | /5 | |
| Method of execution explained: forging, pattern-welding, forge welding, etc. | /5 | |
| Explanation of concepts, metallurgy understood (heat treatment, phase transformation, internal stresses, extractive metallurgy if produced from ore, etc.) | /5 | |
| Characterization | | |
| Mechanical properties testing | /5 | |
| Metallography (sample preparation quality, proper magnification, proper etchants) | /5 | |
| Proper use of SEM, EDS (if applicable) | /5 | |
| Other tests (blade geometrical measurements, balance point measurement, etc.) | /5 | |
| Communications and Style | | |
| Aesthetics and layout | /2 | |
| Correct spelling, fonts, units, formatting | /2 | |
| Report structure: abstract/introduction/experiments/conclusions | /2 | |
| Easy to read and understand (clear sentences , use of proper technical terms) | /2 | |
| Proper referencing | /2 | |