



**Tamahagane Steel** is made by building and firing a Tatara, the traditional Japanese sword-steel smelter. This charcoal-fired furnace produces a very pure steel from iron sand, and this steel “Kera” or bloom can be broken and separated into high- and low-carbon pieces, which respectively form the “core” steel and “skin” steel of the blade. The skin steel is forged and folded repeatedly, to remove slag inclusions and voids and is then wrapped around the core steel before the resulting billet is forged into a blade. Careful heat treating, shaping and polishing reveals the tight “Hada” or layer pattern of the blade and the white particles of the “Hamon” or temper line. While this process results in the aesthetic qualities much admired by collectors it also produces a very functional blade, as the high carbon content of the core steel makes a very hard edge possible while the softer skin steel gives the blade its resilience and ability to absorb shock.

