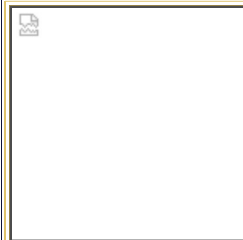




Tang Stamps



Tang stamps

WW2 swords may or may not have a tang stamp. Some of these tang stamps may represent traditionally made swords. This issue is however hotly debated, and some of the arguments below may be considered controversial by some.

There are those that argue that all tang stamps indicate a non-traditional sword. However, this argument does not stand up to analysis. Not all tang stamps are equal. The star stamp, for example, was used to indicate blades made by smiths of the Rikugun Jumei Toshō (Army approved swordsmiths).

Similarly, the Minatogawa Kikusui mon indicates the blade was made at the Minatogawa Shrine. The Minatogawa Shrine forged traditionally made blades, i.e. gendaito, for the Navy. Minatogawa swords are relatively rare as only a few hundred were made, and they are avidly sought by collectors.

The same applies to the Yasukuni Shrine swords, which were made for the Japanese Army. Only 8,100 of these blades were made, and they are also considered rare. Any sword made at the Yasukuni Shrine forge by a Shrine smith is, by definition, a gendaito. These blades are considered to be among the best quality traditionally made blades of the WW II era. A list of Yasukuni Shrine swordsmiths is available at Chris Bowen's [Tokyo Kindai Toshō Index](#).

Swords of the WW2 period which have received origami (authentication papers) from the Nihon Bijutsu Token Hozon Kai (NBTHK) or Nihon Token Hozon Kai (NTHK) are also considered gendaito. However, not all of a smith's blades are gendaito simply because one blade amongst many has received origami. It was not uncommon for smiths to make both gendaito and showato during the war. Again, each blade must be judged on its own merits, and not just on the signature of the swordsmith.

Which brings us to the common tang stamps, such as Showa, Seki and Mukden stamps. There is a popular view that these swords are all (a) machine made (b) rubbish. Whilst there is some truth in this argument, it is far too much of an over-generalisation.

I first came across this argument thirty years ago. I had a sword with a Showa stamp, and there was a Japanese togishi in London. I, being the very new to the field, took my sword to see the togishi, to see if he would polish it. He wouldn't. He took a cursory glance and handed it back. "Rubbish!" he said, "machine made from a single piece of steel. No hamon!" So I asked him about sharpening it. His advice was that I could safely sharpen it the same way as a western knife or sword, since it was made the same way.

So I got out my whetstone and oilstones and sharpened it up - and sharpened straight through the skin metal. One screwed Japanese sword. You see, the problem was that it wasn't made of a single piece of steel. It had core and skin steel. Etching subsequently demonstrated that it had a gunome hamon, although it had been obscured by the wartime polish; I never had a chance to find out if it was water tempered. For all I know, it may have been laminated.

The togishi had relied upon the assumption - unfortunately incorrect - that showato

were all machine-made rubbish. That after all was – and often still is – the received wisdom. I for my part assumed that he was correct because he was the authority on swords. As a result, I have learned that I should never believe in authorities, no matter how well established or revered.

With hindsight, the togishi's reaction was unsurprising. Most Japanese, togishi included, have never seen such swords because they are illegal in Japan. They therefore know little about them, apart from assumptions and received wisdom. In fact most of the research in these swords has been conducted in the UK.

Nevertheless, the argument is still influential and widely accepted. However, as my old academic mentor once remarked, if data disagrees with theory, then theory is wrong, no matter how attractive the theory is. In this case there is evidence to contradict the theory as a general case, and none - apart from assumptions - to support it. If someone feels the need to justify the received wisdom, they are going to have back up their argument with statistical data from a statistically significant sample. The practice of saying that it is so because a certain authority said it was so should have gone out with the medieval period.

Tang stamps are found on some of the poorest blades the Japanese ever made. However, the purpose of tang stamps was only indicate that the sword's manufacture was non-traditional in some way. To be considered traditional, the starting material must be tamahagane, and the sword must be forged in the traditional manner, and differentially tempered using yakire and water as a quenching agent. If only one of those things is non-traditional, then the sword as a whole is not considered traditional. If, for example, the starting point is not tamahagane, but foreign imported steel, then the sword is not traditional; it is not a nihonto. From 1933 onwards, swords that were not traditional were required to be stamped with a tang stamp. Since the war swords with a tang stamp have been regarded as poor swords by virtue of being non-traditional.

As we shall see, there are serious problems in applying this argument in all cases. For now it should be noted that the use of non-traditional materials is neither new, nor is the result necessarily inferior to a traditionally made sword. To argue otherwise is simply evidence of prejudice. Tamahagane is not the most ideal starting material for a sword; the perfection of the Japanese sword is down to the ability of generations of Japanese smiths to overcome the limitations of their starting material. Japanese smiths were, like any perfectionists, always on the lookout for anything to improve their swords. The Edo period smith, Yasutsugu, was the first to use foreign steel rather than tamahagane, and proudly marked this fact on his tangs. It meant a better sword. By today's rules, Yasutsugu's swords would not be considered traditional because of the inclusion or use of foreign iron. If they had been made during WW2, the law would have required them to bear a tang stamp. These days they would be classified as showato and regarded as inferior. They are however considered traditional because they are antique and are regarded as superior examples of nihonto. Spot the illogic.

To enquire further into the issue of tang stamps, we must first understand the methods of sword manufacture used in Japan prior to the end of WW2. Richard Fuller describes nine manufacturing methods:

1. Tamahagane gendaito. Fully hand forged and differentially hardened in the traditional manner using water as a quenching agent. Possesses an active hamon and hada.
2. Mill-steel gendaito. Fully hand forged from mill steel or (more often) 19th century railway tracks made from Swedish steel. Differentially hardened in the traditional manner using water as a quenching agent. Possesses an active hamon and hada.
3. Koa-iss Shin Mantetsu-to. Made from Manchurian steel by a special process. Partly forged, partly engineered, and differentially hardened in the traditional manner using water as a quenching agent. Possesses an active hamon and hada.
4. Han-tanren abura yaki-ire-to. Partially forged from mill stock, some folding, differentially hardened using oil. Does have a hamon although it is nowhere near as active as a water-quenched sword, but lacks hada.

5. Sunobe abura yaki-ire-to. Drawn down, forged to shape, not folded. Differential hardened using oil, may have a fairly inactive hamon, but no hada.
6. Mantetsu-to. Rolled from Manchurian railway tracks. Differential hardening using oil, may have a fairly inactive hamon, but no hada.
7. Murata-to. Rolled or drawn, oil hardened but not differentially hardened. Yakiba but no visible hamon and no hada.
8. Tai-sabi-ko. Stainless steel, oil-hardened, no grain, no hamon, possible yakiba. Made for the Imperial Japanese Navy to resist salt corrosion.
9. Machine made. Serial number in the blade. No forging; stamped out and quenched in oil without differential hardening, assuming that they are hardened at all. No hada and no hamon. Some may in fact be plated, and in the worst cases the hamon may be acid etched onto the steel. The classic example is the NCO swords. On a par with Chinese fakes, and the most commonly faked sword.

Only the tamahagane gendaito is considered traditional, i.e. a nihonto. All the rest, including the 'mill steel' gendaito, would have to bear a tang stamp. Whilst 'mill steel' gendaito can be very, very good indeed, the non-traditional group includes some pretty awful examples of swordmaking. As a result, the whole group tends to be known by the worst examples. This is probably unsurprising; the bulk of this group consist of oil-hardened blades (abura yaki-ire-to). That doesn't mean that the entire group followed this pattern.

The 'mill steel' gendaito radically differ from the abura yaki-ire-to; they are like chalk and cheese. The 'mill steel' gendaito could be regarded as following the precedent set by [Yasutsugu](#) and his use of namban-tetsu.

The best 'mill steel' gendaito are made from mid-19th century railway tracks that were manufactured from Swedish steel and exported to Japan. Swedish steel has been highly prized for its excellence and purity for centuries. In the 19th century it was [puddled](#) to produce sponge iron of exceptional quality. The sponge steel was then forged into bars and subsequently baked for weeks with an appropriate quantity of charcoal. This resulted in [blister steel](#). The carbon content of blister steel was very unequal, so the bars of blister steel were broken up, forgewelded together, and the block then folded and repeatedly welded to produce a consistent carbon content of about 0.7%. The block was then rolled and heat treated to produce pearlitic railway tracks. The metal also contained some manganese, which made the tracks tougher and harder than straight carbon steel. As a result of the manufacturing processes, the rails had an inherent grain. This was due to the forgewelding process, and the steel having slight variations in its carbon content. As a result, a polished rail of the period has a grain resembling a coarse hada, for exactly the same reasons that a tamahagane sword has a hada.

In short, the process of making the tracks was analogous to the earliest stages in making a sword from tamahagane. However, the average Japanese sword has a carbon content of 0.5%. Some particularly vicious cutters have a carbon content of 0.7%, but these are unusual, and are probably Koto blades. The use of good Swedish steel therefore meant that the smith could make a blade that was potentially in the same category as the highest performing traditional blades. Furthermore, the presence of manganese means that the metal is tougher than straight carbon steel. Add traditional hand forging and construction techniques, plus decarburisation of the steel forming the core, and you have a blade that would be likely to outperform all other WW2 blades except, possibly, a Koa Isshin blade. However, even a Koa Isshin blade would have a run for its money. All it requires is the smith having the ability to realise the full potential of this material.

I have a sword made this way. It is a work of art. It has a lovely skilful hamon and a hada. It is also beautifully balanced and in full polish. Oddly enough, the smith has used the sugata of a Koto blade, rather than the standard WW2 design. Anyway, I had it out the other day, and set the bare blade down to study it. It slipped a couple of inches, and sliced cleanly through a canvas bag it encountered on the way as if the bag were not there. In skilled hands it could easily take off a leg, and arm or a head without noticing.

Similarly good results may be achieved by forgewelding together a lamination of differing grades of mill steel. This method has been perfected in the post-war period by American smiths, and has also resulted in blades of prodigious performance. Such swords have a hada and an active hamon, although they are usually more easily distinguished from nihonto. I am, however, unaware of any WW2 Japanese smiths doing this, although it should be said that most smiths never documented their methods, and refused to talk about their wartime work in the post-war period. Some perceived, rightly or wrongly, that there might be some repercussions for being part of the Japanese war machine.

Manchurian steel was highly esteemed by WW2 swordsmiths. In fact the Dairen Manchurian Railroad Factory (Mantetsu) thoroughly analysed the Japanese sword with a view to improving it, including reducing its susceptibility to cold fracture in extreme climactic conditions. The resulting prototype subjected to an appraised cutting test. The prototype was, as a result, appraised in error as a Koto sword forged by Tadayoshi of Hizen, on the grounds that only a Tadayoshi sword could cut like that (more preconceptions!). Encouraged by this, in 1937 Mantetsu went on to manufacture the Koa Isshin sword, turning out some 400 a month.

Koa Isshin swords are not traditionally made swords, and are therefore not 'art swords'. However they are, from an engineering point of view, superbly made. The cutting edge has a hardness of Rc 72 (far in excess of all western blades and many Japanese swords), whilst the construction is far more consistent than many traditionally forged Japanese blades. The result is not an inferior sword at all, but a superb, high quality, cutting instrument that exceeds all but the very best Koto 'art swords' for effectiveness. Koa Isshin swords are therefore highly valued by martial artists.

Or to put it another way for my re-enactment friends, practical tests indicate that a sword edge of mid-Rc 60s hardness will cut chainmail. A Koa Isshin sword at Rc72 would, in all probability, make mincemeat of chainmail and would probably seriously damage modern plate armour. I doubt that it would affect medieval tempered plate to a serious degree though.

I might note in passing the similarities in steel manufacture between the Koa Isshin swords and the swords made from Swedish steel. Both start with extremely pure sponge iron. The former, and possibly the latter, cut as well as the best Koto 'art' swords. The secret of making Koto swords has been lost for centuries, and Japanese smiths have spent generations trying to recover it. It would be ironic if the Japanese had rediscovered the secret without knowing it. You see, the Chinese had puddling furnaces ([chaolu](#)) by the 1st century AD at the latest, and tamahagane would be an ideal feedstock for such a furnace. The Chinese had also discovered how to [accurately control](#) the carbon content of steel. Perhaps the secret of Koto blades lies in the method of steel manufacture, rather than in the subsequent forging of that steel.

Both Koa Isshin swords and 'mill steel' gendaito are therefore superb cutting implements despite – or rather because of – their non-traditional elements. Are they however 'quality' swords? Well, it depends upon what we mean by 'quality'. The quality of a Japanese sword is judged, not on its cutting ability, but on the evidence of craftsmanship that it shows. Performance and quality are however usually related; as a general rule (and bearing in mind the exceptions), the lower the craftsmanship, the poorer the sword, and the poorer it performs. This is true regardless of whether the sword is made from tamahagane or not. It is a bit like judging breeds of dogs; points are awarded for the craftsmanship shown in creating the shape of the sword, the hamon, the hada and all the other bits that go to make up a traditional sword. By definition, oil tempered swords, which make up the bulk of the non-traditional swords, will lack essential elements. The more elements they lack, the poorer they are.

A Koa Isshin sword is a simple, workmanlike piece that was designed to function as an effective cutting tool. Ideas of artistry were very secondary. 'Mill steel' gendaito were however crafted by skilled smiths who brought all their skill and artistry to bear in making them.

Fuller's list is organised in terms of descending quality. Koa Isshin swords and 'mill steel' gendaito probably perform equally well, although the latter has a marked edge when it comes to evidence of craftsmanship. Fuller also places 'mill steel' gendaito lower than tamahagane gendaito as far as quality is concerned, although the former

can probably, as a general rule, outcut the latter.

In fact the difference in quality between tamahagane and 'mill steel' gendaito probably isn't that high. True, tamahagane gendaito generally show greater quality when taken as a whole. However, the tamahagane gendaito class includes the work of Japan's top smiths, who had an uninterrupted supply of tamahagane, and therefore did not experiment with 'mill steel' gendaito. No doubt they could have done so, but tradition was against it. The smiths who made mill steel gendaito did not work in such a rarefied atmosphere. There was probably little difference in quality between the gendaito produced by an individual smith, regardless of the starting material. In swords, as in statistics, one should compare like with like.

The proof of the pudding is, in this case, in the legislation. Tang stamps were introduced precisely because swordsmiths and collectors could not distinguish the best quality non-traditional swords (i.e. 'mill steel' gendaito) from traditionally made swords. It was discovered that, as a result, some smiths were forging replicas of older swords, giving them false signatures (gimei), and passing them off as the real thing. Several smiths were subsequently arrested. Amidst mounting concern, the government passed a law in 1933 requiring all swords that were non-traditional in any way to be marked with a tang stamp, although the actual stamp used was left to the manufacturer. These stamps should not however be confused with the smith's personal seal or 'kokuin'.

The system was not fully implemented until 1940. That means that there could be a fair number of swords of non-traditional manufacture not bearing tang stamps, of which some will be 'mill steel' gendaito. It would be fairly easy to differentiate between an oil-hardened sword and a traditionally made sword, even if the former lacked a tang stamp. However, there would probably be little or no chance of differentiating between a 'mill steel' gendaito and a tamahagane gendaito. It is not impossible that some examples have since received origami. Again, a togishi can remove a tang stamp so that it looks as if one was never there. Some smiths stamped their tangs very lightly, thus complying with the law, but making it easier for their customers to remove the stamp.

The legislation produced a profusion of stamps, ranging from sword factory stamps, to the stamps of sword sellers. The commonest are illustrated at the beginning of this essay. The best known of these is the well known Showa stamp. This is a general army stamp; contrary to received wisdom, it is not an arsenal mark. The earliest known example dates from May 1940.

The Showa stamp seems to have been restricted to swords that were sold off-the-peg through the Army Officers Club (Kaikosha). Here we already have a potential element of confusion; does a Showa stamp necessarily indicate a non-traditional sword, or did it simply indicate a sword that was sold 'off-the-peg' via a certain organisation, the bulk of the swords sold being non-traditional in some way? In short, were the swords stamped because they were 'off-the-peg, regardless of method of manufacture, or were off-the-peg swords limited to non-traditional swords. If the former is true, then some swords with a Showa stamp may indeed be traditional swords. More research is needed.

The Showa stamps were superseded in late 1941-early 1942 by the various arsenal marks. Japan had moved to a war footing following Pearl Harbour, and now needed to supply its army and navy with as many swords as possible as quickly as possible. As a result, swords with arsenal marks are almost certainly always oil tempered, because it was the quickest method of manufacture. I qualify the preceding remark however, because you can almost always find an exception to the rule with Japanese swords. However, you are highly unlikely to find a good sword amongst them, and the quality drops as the war goes on. The machine-made swords, and the end of war swords are possibly the worst swords ever made in Japan, and are pretty much overlong butter knives. The former can be recognised by the serial number near the habaki.

WW2 tang stamps are thus a far more complex subject than they might appear to be at first sight. Each WW2 sword needs to be closely examined on its own merits, with assumptions put aside.

There is however one important consideration to bear in mind. If a blade with tang stamp is shipped into Japan it will be seized, and it may be destroyed. This is because

Japanese law classifies it as a weapon, rather than as a work of art. A gendaito on the other hand is a cultural asset. As a result, one may occasionally find swords in which the Showa stamp has been obliterated in order to send it to Japan for polishing or assessment. The distinction between the traditionally made sword as art, and the non-traditional sword as weapon was originally enshrined in law by General MacArthur.

Whilst there is a long history of the Japanese sword being considered art, in my opinion its primary function as a weapon often gets overlooked. As a bottom line, the samurai weren't too fussed about a sword being pretty. They were far more concerned about its effectiveness; their lives depended upon it throughout much of Japanese history. Generally 'prettiness' indicated a high quality sword that was also extremely effective. As a result, and given the lack of Rockwell testing equipment in medieval Japan, signs of craftsmanship became revered as an indication of blade quality. Mind you, the Japanese of that period were also pragmatic; test cutting was also a good indication - preferably on criminals condemned to be executed.

The problem is that, in the more peaceful Edo period, prettiness was sometimes elevated for its own sake, without reference to the primary function. For example, some people admire large nie inclusions. However, nie is the visible evidence of an enlarged grain structure at the transitional zone of the hamon. It means that the steel was held for too long at critical heat, and the grains enlarged. The larger the grain is, the weaker the sword. That's basic metallurgy, and is the reason stainless steel blades snap unexpectedly in use. However, the end result looks very pretty, particularly in the ji, and some people like it. Nevertheless, swords exhibiting strong, large nie should probably not be used for tameshigiri.

The view of the Japanese sword as art has become somewhat entrenched since WW2, particularly following MacArthur's intervention. From my point of view however the sword cannot be separated from its primary function as a weapon. Form follows function, not the other way about.

The modern Japanese smith is also further constrained. Legislation has locked him into using materials and methods that have remained unchanged since the 16th century. There is also a limit on the number of swords that can be made each month. Any departure from the traditional is forbidden since the smith would then be making a weapon and not a cultural artefact. As a result, Japanese smiths cannot follow Yasutsugu's example and use 'foreign' steel. It should however be noted that some add 'old steel' to their mix, and this 'old steel' may well be of foreign manufacture. Technically speaking, that makes such swords non-traditional. As for the prevalence of this practice - well it has been observed that many Japanese swords are harder than they were a generation or two ago.

American swordsmiths do not operate not under such constraints. 'Mill steel' gendaito produced by American mastersmiths such as Walter Sorrels are amongst some of the most formidable blades ever produced, and they are still improving. The quality of their work, as defined by Japanese standards, is also high and improving all the time - there have been occasions when a sword made by an American smith has been mistaken by a Japanese expert for a nihonto. Swords made by the American smiths are, however, not cheap; they may set you back £2,000-£3,000. They are not however Japanese swords, because those have to be made in Japan, by a Japanese smith, and by traditional methods.

CONCLUSION

If you want a sword for collecting, then it also comes down to whether or not you care about whether it is classed as a true nihonto or not. Collectors of nihonto find the question absolutely central and will ignore swords bearing tang stamps. On the other hand, the question is completely irrelevant as far as collectors of militaria and students of gunto are concerned. And as far as martial artists are concerned, all swords exist to be used; the only question is, how good is the sword as a cutting tool, and what sort of balance does it have? Whilst I think it unlikely that any martial artist would turn down a gift of a nihonto, they would probably be equally happy to receive a 'mill steel' gendaito or a Koa Isshin blade.

To recap, if there is a hada, an active hamon, and no evidence of a tang stamp being removed, then you almost certainly have a tamahagane gendaito. Almost - but not quite. You see, before the 1933 law was brought in, it was not necessary to stamp the

tangs to indicate a non-traditional sword. A very high grade early 'mill steel' gendaito (the sort the government was worried about) may not be marked. That's why I'm often very cautious in describing something as a nihonto unless I have definitive evidence and opinions that it is not an early 'mill steel' gendaito.

OK, so this is being picky, and other people would rightly point that if it hasn't got a tang stamp, and it has got a hada and active hamon, then its a gendaito by definition, and thus a nihonto. Ah, but there are those pesky very early non-traditional swords that lack tang stamps to take into account, some of which will be 'mill steel' gendaito. Unfortunately there's no way to distinguish these from the tamahagane versions that I know of. The only thing I would suggest is to examine each sword minutely and judge it on its merits. Even that may not suffice. Of course, you could do a metallurgical analysis for manganese, but I suspect that some people might not go for this, since they might not like the results. It is not impossible that a few papered WW2 gendaito from the 1930s were actually made from Swedish steel and not tamahagane. Yes, 'mill steel' gendaito can be considered that good if you remove the tang stamp, or if they were made before the law required them to have a tang stamp.

To put it another way, imagine a cutting ability comparable to the Koa Isshin allied with the craftsmanship of the tamahagane gendaito.

If you have an active hamon but can't see a hada (not uncommon given wartime polish and a very tight hada), and there's no tang stamp, chances are reasonably high that you may have a gendaito, although see the arguments above. If you have very high class mounts as well, it is pretty certain. However, you need a window polish to clear things up. It should however be recalled that some traditionally made swords are forged with such a tight hada that they are muji - there is no visible grain. That's not the same as saying that there is no grain.

If you have got a tang stamp, work on the assumption that the blade is non-traditional in some way. If you've got a tang stamp, a hada and a water tempered hada - ah well now you've got a mild puzzle. Which is where this little essay started.

Finally, if a hada is not present, the hamon seems a little dead and there is a tang stamp, then you've got a bog standard, oil-hardened gunto. However, these swords are good for training, as long as you don't attempt tameshigiri.

Japanese swords are one of those areas where it is unwise to be dogmatic. The best advice therefore is to study each individual sword in its own right, assess its quality, keep in mind your purpose for buying one, and take your time in making up your mind.

Further reading

JapaneseSword.com (2002) [Koa Isshin Mantetsu Katana with Red Brown Tassle](#)

JapaneseSword.com (2004) [Koa Isshin Mantetsu Katana](#)

JapaneseSword.com (2005) [WW II Mantetsu-to](#)

Ohmura T (2002), [The whole aspect of the Koa-Issin sword](#)

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