



**VACHERON CONSTANTIN**

Manufacture Horlogère. Genève, depuis 1755

### ***The “Métiers d’Art – La symbolique des laques” collection***

No one at Vacheron Constantin can be unaware of what a passion for fine watchmaking involves. For without passion, there are no real expectations. And though yesterday’s *cabinotiers* have disappeared, their memory lingers on near the workbenches in the halls of the *Manufacture*, and today is reawakened by each watchmaker and craftsman, whose movements rekindle their spirit and perpetuate their knowledge.

Time is also memory. Undoubtedly, one of Vacheron Constantin’s greatest qualities is that it remains faithful to these visionaries and virtuosi of another age. The ethics and commitment to excellence that motivate each of its employees have kept the company consistent for over 250 years. Embracing the philosophy of one’s forebears, when it includes this essential humanism, brings a kind of happiness that few are privileged to enjoy.

Vacheron Constantin is deeply committed to handing down and developing the watchmaking trades, especially the artistic crafts, which bring together the quintessential skills of the highly specialised decorative arts used in watchmaking (enameller, engraver, guillocheur, and gem-setter). This commitment continues today through timepieces that are true works of art and whose manufacturing secrets survive in the workshops of only a few masters and craftsmen.

## **The Métiers d'Art collection...**

**When knowledge of the spirit resides in the hand that gives life to the object,  
Man endows each of his creations with a soul.**

When Vacheron Constantin institutionalised the *Métiers d'Art* collection in 2004 with the limited series of *Tribute to the Great Explorers* timepieces, it demonstrated its unshakeable will to perpetuate one of its core values: carrying on the traditions of craftsmanship found in fine watchmaking's artistic trades.

So, for this initial collection, master watchmakers combined their talents with master enamellers – each working in their respective crafts as masters and lovers of their art – to combine ancient and modern techniques and give birth to watches that are exceptional for both their mechanics and their aesthetics. The patented movement combined an astonishing display of the time with a dial made even more beautiful by an ancient and complex art: *grand feu* enamelling.

On the same principle, the *Masques* series in the *Métiers d'Art* collection – the first set of which was presented in 2007 – also illustrated to perfection how skills and expertise can be combined. In this case, the skills and expertise were those of master watchmakers and master engravers, who worked hand in hand to create timepieces that were true invitations to travel through time and space in search of humanity's roots, and to reflect upon one of the most beautiful expressions of its soul.

**An encounter between Vacheron Constantin,  
which in 2005 marked 250 years of activity in Geneva,  
and Zôhiko, which will celebrate its 350<sup>th</sup> birthday in Kyoto in 2011...**

**Together, more than 600 years of history.**

The incredible reaction to the *Métiers d'Art Les Masques* collection born of the encounter between Vacheron Constantin and Geneva's Barbier-Mueller Museum has only strengthened the watch manufacturer's conviction that today, more than ever, it is important to match the cultural and artistic trades with watchmaking of the highest technical quality.

Such a combining of talents, associating both technical and decorative virtuosity with accuracy, perfectly illustrates Vacheron Constantin's core values: seeking excellence, supporting creativity, being open to the world, respecting and handing down traditions, and finally, sharing the passion.

Now, the brand is opening up a whole new horizon for combining watchmaking and decorative techniques, by offering for the first time a *Métiers d'Art* collection in which part of the work is done outside Geneva – and in fact on a far-off continent, since mysterious term *maki-e* refers to the crown jewel of traditional ancestral Japanese lacquer techniques.

**How the “Métiers d'Art – La symbolique des laques” collection came about**

The idea of a project combining *maki-e* and watchmaking had long been filed away in the drawers of Vacheron Constantin's design department. But the spark that would bring it to life had never been found. The spark was finally to come from Zôhiko, which had the same idea in reverse – combining the talents of the watchmaking arts with those of the lacquer arts.

The reference to “Masks” is no coincidence: it was the technical and artistic boldness and the beauty of this collection that encouraged Zôhiko to introduce itself to Vacheron Constantin in the autumn of 2007, to explore the possibility of cooperating.

While chance and luck play a role in every meeting, a true relationship can be built only on the basis of deep affinities and shared values. These developed immediately between the two companies, both of which have the same fundamental respect for cultural, technical, and artistic traditions. Vacheron Constantin is the repository of an uninterrupted history dating back to 1755, and Zôhiko, founded in 1661, is almost a century older. The two together have garnered 600 years of experience and expertise.

Above all, however, this collection is a human adventure. It is a voyage through and exploration of an unknown “great beyond” in which craftsmanship and innovation come together at their zenith. Of this union between the craftsmen of one of the oldest Japanese lacquer companies, Zôhiko – headquartered in Kyôto since its founding in 1661 – and Vacheron Constantin – the world's oldest watchmaker, which has been making watches in Geneva without interruption since its beginnings in 1755 – was born a remarkable embodiment of the same core values: the *Métiers d'Art – La symbolique des laques* collection.

### **Three Years, Nine Designs, Sixty Sets**

True to the spirit of the *Métiers d'Art* collection, the *symbolique des laques* theme will change over a period of three years, with each year bringing a new set of three watches in a limited series of twenty.

Each set will feature motifs selected from the vast symbolic treasure trove of Far Eastern artistic traditions. Each design, which may stem from the world of animals, plants, or minerals, has meaning and can be combined with another: divine or heroic figures are associated with animals, these animals with plants, the plants with virtues or abstract qualities, and so on. The designs often make reference to literary works, poems, or legends.

From a watchmaking standpoint, the legendary ultra-thin Calibre 1003 has been chosen by Vacheron Constantin to equip this series of timepieces – and more specifically a skeletonised version of the movement crafted in 14-carat white gold. Nonetheless, so as to magnify the overall harmony and to ensure that the *maki-e* craftsmanship is suitably highlighted, Vacheron Constantin even went so far as to opt for a ruthenium treatment which – by toning down the natural radiance of gold – creates a particularly elegant effect on this model. The sapphire crystals on either side enable one to admire the exceptional finishing, and in particular the bevelling craftsmanship performed in the workshops of the Geneva-based *Manufacture*.

Meanwhile the deceptively simple lines of the delicately rounded case radiate an exemplary understatement and purity entirely in tune with the zen spirit of the *Métiers d'Art – La symbolique des laques* collection.

### **Longevity**

The first set will explore the theme of long life with “The Three Friends of Winter” – **Saikan no sanyû** 歳寒三友 : the pine tree, bamboo, and the plum tree. This classic trio of the Chinese symbolic system was a very early arrival in Japan, where it is just as popular as in its country of origin. By virtue of their resistance to extreme cold, the “Three Friends of Winter” have longevity as their primary symbolic meaning. By extension, they are also associated with the loyalty of a friendship that survives the hard times symbolised by winter.

Pine trees are venerated for their age and strength. They are also held in high esteem because they remain green in the winter. Bamboo is seen as a perfect gentleman, flexible in the face of change but without ever giving up its ideal: once the storm has passed, it returns to its original position. The plum tree is respected because it is the first tree to flower, while winter still holds sway, and it is the longest-lived fruit tree. The ideal of well-read Chinese and Japanese was to be “strong like the pine, tough like bamboo, and pure like the plum tree.”

### **Each of the “Three Friends of Winter” is paired with a Bird**

For example, the long-lived pine is accompanied by the crane, whose whiteness recalls the accumulation of years. Bamboo is associated with the sparrow, whose ceaseless activity symbolises the vitality of the continually renewed bamboo. Finally, the plum tree is matched with the nightingale, because both celebrate the arrival of spring, one with its early flowers and the other with its song.

Vacheron Constantin chose this combination of three double motifs in close cooperation with Zôhiko. Each watch has a double face lacquered using the *maki-e* technique. The main design of the tree on the front of the watch is matched by the bird design on the back, facing the wrist. Here, too, Vacheron Constantin’s choice falls within a Japanese tradition, as many Japanese lacquerware objects are decorated even on their hidden surfaces, for example, on the insides of lids or the bottoms of boxes.

### **The Pine Tree and Crane Watch – *Matsu to tsuru* 松と鶴**

In Japan, the pine tree has always been prized for its wood and the beauty of its twisted shapes. Even so, its pre-eminent role in art and literature largely reflects traditions borrowed from the continent. These traditions were inspired in large part by the fact that the pine is an evergreen, and so is associated with longevity and steadfastness. Both Chinese art and Japanese art considered the pine to be one of the “virtuous” plants, both as the symbol of winter and the new year, and as the main symbol of long life and even immortality.

Like the pine tree, the crane has also always been a symbol of longevity and noble elegance. Alongside the phoenix, it is one of the birds most wreathed in the legend and mystery of Far Eastern traditions. It is said that not only can it achieve incredible longevity, but once it reaches an age of 600 years, it can live on nothing but cool water. Furthermore, at the beginning of its 2000<sup>th</sup> year, its immaculate white plumage turns deep black. The crane is also one of the aerial messengers of Taoism’s immortals. In Japan, the crane’s mythical qualities are joined by a purely aesthetic dimension related to its gracefulness and beautiful plumage. The seasonal arrival of cranes that come to winter in Japan was welcomed joyfully and considered a harbinger of prosperity. For all of these reasons, cranes once enjoyed imperial protection. They were reserved strictly for the Emperor’s pleasure, and until the Meiji restoration in 1868, hunting them was prohibited.

### **The Bamboo and Sparrow Watch – *Take to suzume* 竹と雀**

In Taoism, and to a lesser extent Buddhism, the tubular structure of bamboo symbolises the notion of emptiness. Like *Tao*, “the way,” which rises up from emptiness and returns to it, the centre of the bamboo is empty. This emptiness, or space, also represents the simplicity of tolerance and open-mindedness. Bamboo’s flexibility and toughness, which allow it to bend without breaking, represent integrity.

Though it does not live as long as the pine, bamboo is also associated with longevity. While a single bamboo shoot does not live long, an entire grove can grow from a single shoot. Similarly, bamboo dies after it flowers, but many kinds flower only once each century, which means that they do, after all, reach a respectable age.

Bamboo groves make especially attractive nesting sites for flocks of sparrows. Despite their restless and sometimes quarrelsome ways, sparrows are considered to be a symbol of loyalty in Japan. They never stop singing “*chu, chu, chu!*” or “be loyal, loyal, loyal!” In collections of popular legends, the sparrow is often represented as having a strong sense of honour and duty. The pairing of bamboo and the sparrow also frequently appears in the paintings of Zen Buddhism, in which bamboo signifies the ideal of awakening and freedom from worldly attachments, and the sparrow represents spontaneity and *joie de vivre*.

### **The Plum Tree and Nightingale Watch - *Ume to uguisu* 梅と鶯**

The plum tree is known above all for the fact that its delicate, pink-tinged white flowers open in mid-winter. Their subtle perfume spreads through the coldest month of winter, awakening the first hope of spring. Although neither the plum tree nor its flowers are particularly magnificent, they have such a fresh, exquisite character that they delight the spirit in the midst of winter’s desolation. The plum tree serves as a metaphor for inner beauty and humility in the face of the world’s adversities.

The pairing of the plum tree and the nightingale seems to be more of a Japanese development. Both are the first messengers of spring: the first song of the nightingale is called *hatsune* 初音, or “the first sound of the year.” There are countless examples in art and poetry associating the plum tree and the nightingale. They are frequently depicted with snow as well, as plum trees often open so early that their flowers seem to blend in with the snowflakes.

### **What is *maki-e*?**

*Maki-e* – which literally means “sprinkled picture” – is the most sophisticated of all lacquer techniques, designating a decorative operation in which the design is created by delicately sprinkling gold or silver dust over lacquer – usually black – while it is still wet.

The lacquer is made from the sap of the lacquer tree, *Rhus verniciflua*. This tree, a relative of poison ivy, originated on the high plateaus of central Asia or Tibet. Today, it grows only in southern China, Korea, Vietnam and Japan, but it seems to have had a much wider range in the past. In Japanese, the word for the substance and the name of the tree are the same: *urushi* 漆. The corresponding ideogram, which consists of the radicals for tree, water, and man, is a true image of what it describes.

Lacquer techniques vary from country to country and are based on the quality of the lacquer and the use to which the objects will be put. The three categories most representative of the lacquer arts are carving, inlay, and *maki-e*.

The number of possibilities is almost infinite, and the invention of *maki-e* and its variations by the Japanese is one of the most remarkable marriages of technical mastery and aesthetic sophistication in all the history of art.

This decorative technique developed very early in Japanese history. It matured as an art form between the eighth and twelfth centuries A.D., becoming the predominant method of ornamentation beginning in the seventeenth century and remaining so to this day. It does not seem to have been used in China – or if it was, it disappeared very early on. It was highly prized there, however, as evidenced by the many orders placed from the continent over the centuries. *Maki-e*'s own rise allowed the techniques it involves to blossom as well. Beginning in the mid-tenth century, this technique far surpassed all its rivals and was heavily preferred over them for the delicacy of its execution, its quality of being distinct yet misty at the same time, and its incredibly poetic presence.

One of the greatest beauties of lacquer is that it can decorate the most precious of objects as easily as those used in everyday life. Lacquerware bowls and crockery have come down through the centuries, as have variously shaped boxes with all sorts of uses: document holders, tea caddies, incense boxes, paintbrush holders, inkwells, card cases, pill boxes, etc. While there has always been lacquered furniture, the preference has almost always been for small objects, for work that is enchanting in its meticulous perfection.

### Zôhiko

In 1661, Yasui Shichibei 安井七兵衛 (1632-1692) opened a shop he named *Zôgeya* 象牙屋 “At the Sign of the Ivory”, where he sold lacquerware and Chinese products. His successor was Kusunoki Jihei 楠治兵衛 (1659-1714), who focused on lacquerware. The shop remained in the family for five generations before passing to Nishimura Hikobei 西村彦兵衛 (1719-1773), then head of production, because there were no heirs in the Kusunoki branch. Kusunoki Jirôbei 楠治郎兵衛 (1723-1784) left not only the shop but also the task of caring for his family's tombs to his senior assistant, thus creating an indissoluble tie of successorship. From that day down to this, Zôhiko has been run by members of the Nishimura family, each of whom has taken the founder's first name. Zôhiko's current director is the ninth Nishimura Hikobei.

The third Hikobei (1806-1875) was granted the title “Master of *maki-e*” by the Emperor for the excellence of his work. One of his most remarkable pieces is a *maki-e* panel representing the Fugen Bodhisattva on a white elephant. History says that the people of Kyôto were so charmed by the beauty of this image that they named it the “Zôhiko panel,” with “Zô” meaning the elephant and “Hiko” being the first part of Hikobei's first name. This is the origin of Zôhiko's company name.

Zôhiko has had a longstanding relationship with the Japanese Imperial Court. The fourth Hikobei (1806-1875) was one of the Court's official suppliers, and the current director made the reigning emperor's official seat. The workshop's first exports date to the very end of the nineteenth century, upon Japan's opening to abroad after the Meiji restoration. The company's expanded horizons were the work of the eighth Hikobei (1887-1965). He was unanimously considered to be a pioneering figure in the lacquer industry. He also founded a *maki-e* school that became a standard of reference for many specialised lacquer artists.

Zôhiko's long history reflects a tradition of excellence that is unparalleled in its respect for both artistic continuity and continually renewed creativity. While continuing to cultivate a tradition that is already over a thousand years old, Zôhiko upon to the world. Sharing with Vacheron Constantin gave rise to an extraordinarily intense collaboration, the fruit of which is called the *Métiers d'Art – La symbolique des laques* collection.

### **Vacheron Constantin and Japan... a resolutely long-term relationship**

During the early years of 1800 an eminent Swiss historian, Alfred Chapuis, referred to Vacheron Constantin's first commercial contacts with Asia, especially China. Elsewhere in the world during the same period, the company was present in South America, with a permanent representative in Brazil. In Russia, it was a regular supplier of the Imperial Court, and in 1847 it gained access to the Indian market.

At that time, Japan was still closed to almost all outside contact. Indeed, between the beginning of the seventeenth century and the middle of the nineteenth, the shogun military government saw to it that the country was almost entirely cut off from the rest of the world. It was only after 1854 that the first commercial treaties with the West were signed, under American pressure. After that, new developments came rapidly and of course the repercussions were felt even as far away as Switzerland.

In 1862 the Swiss Federal Council decided to send a Swiss delegation to Japan, and invited "Mr. Vacheron, watchmaker" to a preparatory meeting. On February 6, 1864, Switzerland signed its first official document with Japan: a commercial treaty allowing Swiss citizens to settle in the country's open ports. At this time, Vacheron Constantin was already held in high regard in Japan, since in 1867 – the year of his coronation – the Meiji Emperor had planned to visit the company's workshops during his visit to Geneva. He was prevented by a last-minute invitation from Monsieur de Rothschild.

In 1884 Japan adopted universal time, which Switzerland did not do until 1892, or France until 1911! Up to that point, Japan had divided the hours unequally between day and night, and depending on the season. So Japanese clocks, or *wadokei* 和時計, were of different design than western clocks, and the adoption of universal time involved more just than a simple adjustment. It was part of the real cultural revolution to which Japan committed as it entered the modern era.

### **The "Japanese Style"**

In 1906, Vacheron Constantin opened its first shop on the island in the heart of Geneva. Right from the beginning, the shop built up a regular and discriminating Japanese clientele from contacts made with people passing through as well as orders from Japan.

From 1917 on, Vacheron Constantin was represented in Japan in the three cities of Tôkyô, Yôkohama and Kôbe. The first watches sent were naval chronometers. It very quickly became evident that the Japanese clients had such specific and pronounced tastes that an entire aesthetic code developed and became known as "Japanese style," with flat, simple, elegant watches and a preference for the colours white and silver.

The period during the late nineteenth and early twentieth centuries that followed the World's Fair in Paris and the Exhibition of Arts in Japan, which created sensations, marked the golden age of "Japanism" in Europe. Ferdinand Verger and his descendants, Vacheron Constantin's Paris representative until 1939, were true creative geniuses who knew how to take advantage of the general fascination with Japan. He made many Japanese-inspired

watches for Vacheron Constantin, some of them playing with enamel to create the illusion of lacquer, and others in genuine lacquer that are still part of the private Vacheron Constantin heritage collection.

In 1953, His Imperial Highness Prince Akihito, now the reigning Emperor of Japan, visited Vacheron Constantin's manufacture and the original shop on the island, and did not neglect to sign the company's guest book.

### **The History of Lacquer, the Secret of the Precious "Varnish"**

*"The tree that yields the true varnish of Japan is called urushi. This tree produces a whitish juice that the Japanese use to varnish their furniture, their dishes, their wooden plates that are used by all kinds of people, from the Emperor to the peasants: for at Court and at the monarch's table, varnished utensils are preferred over those of gold and silver."*

*Engelbert Kaempfer,  
a German physician travelling in Japan,  
A Natural, Civil and Ecclesiastical History of Japan, 1727*

This excerpt sums up the basic essentials of Japanese lacquer. The word "lacquer" means the substance, and is also used as a short form to describe a piece of lacquerware, i.e., an object decorated with this substance. Today, there are three main categories of lacquer: true lacquer, lac, and varnishes.

True lacquer is the sap of a tree that is found only in the Far East. Lac is a resin made from the secretions of an insect that lives in India and Southeast Asia. These two forms of lacquer differ in colour, and even more in their strength and solidity.

Varnishes include all of the European substitutes for oriental lacquer. There are all kinds of such imitations, both plant- and animal-based versions, and now synthetics as well, of highly variable quality. These include, for example, the varnishes used on a Stradivarius violin as well as much more humble and commonplace variants. But none of them can compete with true lacquer's inherent qualities.

### **Lacquer: Magnificence and Origins in the Far East**

In both China and Japan, the use of lacquer dates back to the Neolithic age. Archaeological excavations have established the oldest dates as being close to 6000 B.C. At that time, lacquer was used to cover utilitarian items such as ritual objects. Two pigments were used to colour the lacquer: cinnabar for red, and wood charcoal for black. It was not long at all before lacquer came to be appreciated not only for its protective qualities, but also for its ornamental side.

China and Japan quickly developed the lacquer arts to their highest level. While it was China that got things started with a high-level artistic tradition, Japan soon caught up to the Chinese masters; since the first millennium A.D., the story of lacquer in these two countries has been one of constant dialogue and emulation. So it was that Japan developed the magic of *maki-e*, the technique now found in the *Métiers d'Art – La symbolique des laques* collection.

### **The History of Lacquer in Japan**

In the fifth and sixth centuries, China's political and cultural influence on Japan was extremely strong. It touched all areas, and Chinese lacquer techniques, which at this time were much more highly developed, were also transmitted to Japan. There they immediately struck a responsive chord. Lacquer's importance to the Japanese economy is attested by



the Taiho Code (Japanese constitution), of 701, which provided for the creation of a Lacquer Bureau, *Nuribe no tsukasa* 漆部司, within the Department of Finances; this office required aristocrats to plant lacquer trees on their properties and pay part of their taxes in lacquerware. Workshops produced lacquered items for the Imperial Court, especially, and for temples throughout the country as demand continued to increase.

The lacquer techniques of that day still relied very heavily on China and it is not always easy to determine an object's provenance. In contrast, the essentials of this technique were present, as witnessed by the variety of lacquered objects preserved at the Shosoin treasury in Nara. This treasure, dating to the eighth century, still exists today. It is the world's oldest museum. The seven lacquer techniques identified among the Shosoin objects highlight the importance of this art form from very early in Japanese history. Most of the processes used later were variations and improvements on these original techniques.

**The Golden Age of Lacquer** – The end of the eighth century marked Japan's return to its own values, to such an extent that continental influence suffered a drastic decline. Artistically speaking, a purely Japanese aesthetic, characterised by unparalleled gracefulness and meticulous workmanship, began to develop. The lacquer arts were fully representative of this new development, and in the history of Japanese lacquer, the period from the late eighth century to the twelfth is called the golden age.

At this juncture, ceramic techniques had not yet begun to develop rapidly, and utilitarian objects such as furniture were made primarily of wood – an excellent base for lacquer. This period saw the dawning of *maki-e*'s refined techniques, the delicacy of which perfectly matched the era in which flourished an aristocratic and sophisticated culture steeped in poetry and the arts.

**Lacquer, Tea and Zen** – Around the thirteenth century, Zen Buddhism was introduced to Japan, along with tea. At first, tea was used by the monks for its curative properties, but this expanded into the tea ceremony, which was highly prized among the warrior aristocracy. Many of the objects used to store or serve tea are lacquered pieces: tea caddies and boxes for incense, trays, bamboo spoons, etc. The fluid forms and sophisticated decoration of lacquerware make a perfect match for the aesthetics of tea.

**Lacquer and the West** – The first contacts between Japan and the West were made by Portuguese and Spanish Jesuits during the first half of the sixteenth century. These missionaries also introduced Japan to the first European clocks, which were presented as gifts. In addition, they instituted watchmaking classes, which led the Japanese to develop their own clocks. These timepieces, called *wadokei* 和時計, were adapted to the Sino-Japanese system for measuring time, in which the hours are of variable length. These same Jesuits were behind the first exportation of Japanese lacquerware to the West. The European aristocracy developed a wild infatuation with lacquered pieces, creating a true export industry in Japan with products specifically tailored to western tastes. In Europe, offices and drawing rooms decorated entirely with lacquer furniture were all the rage. One of the most famous lacquerware collections is that of Queen Marie Antoinette (1755-1793), which she had inherited from her mother, Maria-Theresa of Austria (1717-1780). While China was also exporting lacquer, interest in Japanese lacquerware was so great in Europe between the seventeenth and eighteenth centuries that the term "japan" became a synonym for lacquer, just as "china" has come to mean porcelain.

## The Birth of Zōhiko

Between the seventeenth and nineteenth centuries, lacquer became more democratic. Originally reserved for the upper echelons of society, lacquerware became accessible to a broader public. It was in this context that in 1661, Yasui Shichibei opened the shop that was later to become Zôhiko. It was also at that time that a taste began to develop for small objects, the preciousness of which reflected the social status and wealth of their owner. These objects were so small that they could be worn on a belt, hence their name, *sagemono* or “suspended objects.” The most sought-after of these were medicine containers or seal cases, *inrô* 印籠, and pipe cases – both of which became settings for highly perfected lacquer techniques.

In 1868, after over two centuries of turning inward during which contact with the outside world was extremely limited, Japan again opened up to the world, and the West in particular. The subsequent wave of modernisation and industrialisation was so strong that it threatened to swallow up many traditions of craftsmanship. Paradoxically, it was foreign enthusiasm for some such traditions—including lacquer—that ensured, first, their survival, then their revival.

### What is True Lacquer?

Lacquer is made from the sap of the lacquer tree, *Rhus verniciflua*. This tree, a relative of poison ivy, originated on the high plateaus of central Asia or Tibet. Today, the lacquer tree grows only in southern China, Korea, Vietnam and Japan, but it seems to have had a much wider range in the past. In Japanese, the word for the substance and the name of the tree are the same: *urushi*. The corresponding ideogram, which consists of the radicals for tree, water, and man, is a true image of what it describes.

**Harvesting** – A tree must be about ten years old before sap can be harvested from it. Five to ten parallel horizontal gashes are made on the trunk, and a thick greyish sap is collected. Each tree can be tapped several times a year, but produces a total of only a few tens of millilitres. The consistency of the substance collected is similar to that of latex. The quality of the sap depends on many factors, including the age of the tree, climate, soil, and season. It is harvested throughout the spring and summer, but the best-quality lacquer is gathered between June and August; it comes from the central section of the trunk and is collected and processed separately from the rest of the harvest. It is reserved for the top coats of lacquer and for finishing pieces. Lacquer of lower quality is used for the underlying layers.

**Characteristics** – Lacquer has unusual chemical properties that give it very specific characteristics. First, it has the extraordinary quality of drying only in a humid environment. In its pure state, it can dry only if applied in extremely thin layers: beyond thicknesses of 0.05 to 0.3 mm, it remains partially liquid beneath the hardened surface film. Once it has dried, lacquer will seal porous materials such as wood, bamboo, paper or fabric, which then become completely resistant to moisture, salt, heat, liquids – including alcohol – food, and even acids. As a result, lacquer containers are especially well-suited to serving, storing and transporting food and drink. Lacquer is also an excellent adhesive, even for dissimilar materials. It is used as a glue, especially for repairing ceramics. Lacquer has only one weakness: light. When exposed to strong light, lacquer fades, dries out and decomposes.

Lacquer’s great strength, solidity and stability depend mainly on the number of layers applied to the object. There can be anywhere from ten to a hundred layers, with the thickness of each ranging from 0,8 to 1 mm. A good-quality lacquer finish will not erode even after one or two centuries. By way of comparison, an oil painting begins to flake after ten years, and chemical varnishes retain their shine for only twenty or thirty years.

**The Chemistry of Lacquer** – The hardening of lacquer is an oxidation process that has nothing in common with ordinary drying or evaporation. The main constituents of raw lacquer

are an antioxidant molecule called urushiol, and an enzyme, laccase. In the presence of oxygen, laccase acts as a catalyst for the oxidation of urushiol and causes permanent hardening of the raw lacquer, which originally is viscous.

In its raw liquid state, lacquer is toxic and causes severe skin irritation, though some people are immune to this. The composition of the sap is 20% water, 2% laccase, 4% gum and 74% urushiol. The higher the percentage of urushiol, the harder the lacquer will be. The hardness of the lacquer is the mark of its superior quality. In Japan, lacquers benefit from the particularly high percentage of urushiol in the native trees. Japanese sap contains 70-80% urushiol to 7% gum, while in the sap of Chinese, Vietnamese and Thai trees, the ratio is more nearly 50% urushiol to 20% gum.

**Preparation** – Once harvested, the lacquer is stored in a wooden barrel before being refined. It is first filtered through a cloth to remove impurities and make the lacquer sufficiently fluid. Then the water in the sap is removed by evaporation. To accomplish this, the sap is stored from twelve to twenty-four hours in drying chambers (*muro*, “room” or *urushiburo* “lacquer bath”), kept at a temperature of 20 to 25°C and a humidity of 75 to 85%. The drying chambers also serve to protect the objects from dust between two layers of lacquer.

**Supports** – Refined lacquer can be applied to many materials, including textiles, bamboo, leather, ceramic, and metal. For example, samurai armour and helmets were often lacquered. But the main base material has always been wood, usually evenly-grained wood that can be worked until it is very thin. For example, elm wood, *keyaki* 欒, can be made nearly translucent. In addition to elm, cedar *sugi* 杉, Japanese cypress *hinoki* 檜, paulownia *kiri* 桐, and magnolia *hônoki* 朴, lend themselves to this type of work. To prepare the base, all cracks and uneven surfaces are completely smoothed out so the lacquer can be applied to a perfectly even surface. A lacquer artist calls on outside craftsmen for this work. For wood, this would be woodworkers specialising in assembled, turned, or bent wood, depending on what is required for the object.

Once the base has been prepared, the object is ready for application of the preparatory layers of lacquer. Each successive layer must be applied, dried, then sanded before the next layer can be added. The first layers are the thickest, the last the thinnest. The same is true of the abrasives used: the first are the coarsest, the last are the finest. After these steps, which protect the object, the truly decorative part of the work can begin.

**Techniques** – Lacquer techniques vary by country, quality of the lacquer and the use for which the objects are intended. There are approximately one hundred and fifty lacquered pieces from the eighth century preserved in the Shosoin museum in Nara, and seven different processes were used for these pieces alone. But the three most representative categories of the lacquer arts are carving, inlay and *maki-e*.

# **T** ECHNICAL CHARACTERISTICS

## **Métiers d'Art – La symbolique des laques**

### **Limited series of 20 sets per year, housing three watches each**

References	33222/000R-9506 – Pine Tree and Crane 33222/000R-9517 – Plum Tree and Nightingale 33222/000G-9521 – Bamboo and Sparrow
Calibre	1003 SQ, skeletonised, 14-carat gold, ruthenium treated Developed and crafted in-house by Vacheron Constantin Stamped with the Hallmark of Geneva
Energy	Mechanical hand winding
Movement thickness	1.64 mm
Movement diameter	20.80 mm
Jewelling	18 jewels
Frequency	18,000 vibrations/hour
Indications	Hours, minutes
Power reserve	Over 30 hours
Case	4N 18-carat rose gold 18-carat white gold
Diameter	40 mm
Water resistance	Tested to a pressure of 3 bars, equivalent to 30 metres
Dials	18-carat gold coated with Japanese <i>maki-e</i> lacquer
Strap	Black alligator leather, large square scales Hand-sewn, saddle-stitched
Buckle	4N 18-carat rose gold or 18-carat white gold pin buckle Polished half Maltese Cross