

Materials used for manufacturing tobacco smoking pipes

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1. Introduction

It has been long known throughout the ages that tobacco was the man companion, a herb that left a big impact upon many cultures and set a strong foot-hold in almost every where around the globe. For religious ceremonies, medicinal practice or the pure narcotic pleasure; tobacco has been used by many civilizations regardless to which intake method was used whether chewing, snuffing, smoking in pipes or even rolling the whole leaf and smoke it as a cigar.

Pipe smoking has went hand in hand with the tobacco use in the ancient Indian tribes in south America although the primitive type of pipes used at that time where a simple tube where the tobacco leaf is rolled and placed to be smoked like a cigarette/cigar or in different occasions crushed tobacco where placed in these pipe with the laid back position is the only way to smoke the pipe with in this method as indicated by the ancient drawing of the Inca civilization.

Nevertheless tobacco use was further distributed by trade into the African and Asian coasts and tobacco smoking was prevailed in many continents; however the smoking method ranged from earth pipe smoking in Africa to the use of the long metal pipes in Asian parts of the world. Many modification have been made to the smoking pipe manufacturing indeed since the colonization of America by the Europeans and the introduction of tobacco into Europe, and the smoking pipes industry went through many changes whether in shapes or in materials ranging from stone, ivory, clay, metal, meerschaum, gourd, corn cobs, briar and many more used according to the availability of certain materials in specific region and most certainly due to the personal preference of the smokers them self. However, regardless to what is mentioned earlier the concept was always about the same; a place to contain the burning tobacco, a tube to transfer the smoke and a place to inhale the fumes

Almost every material known to the human beings where used in making pipes ranging from the earth pipes which utilized the idea of digging a whole in the ground to place and burn tobacco in and sticking a cane in one of the side to inhale the fumes to the modern type of elegant pipes that we do tend collect and smoke now a days. It would indeed be impossible for me to cover all the materials used in making the tobacco smoking pipes in this article however a general overview upon the most convenient materials used in making the tobacco pipes will be mentioned in the pages to follow regardless to the shapes and designs they where categorized into concerning the stem/bowl orientation which is used for smoking pipes classification. And as most of you know that nothing in existence is complete however to each and every thing its advantages and drawbacks and that's what will be discussed briefly in few lines away.

Wish you a joyful and entertaining educational reading...

Pipes used for illustration are part of my personal collection except for the Kiseru pipe.

Yours with kindest regards

Dr. Ahmad Sadik

2. Clay pipes

Since the discovery of the tobacco by the Europeans in new America and tobacco introduction to Europe clay pipes where used as the essential way for consuming tobacco, beside the cigars and snuff. The clay pipes make-shift has changed throughout the years from simple cup shaped tobacco bowl and thick stem in the 15th century similar to a little ladell known for their small capacity for the tobacco due to the lack of availability and the awareness to use as little as possible, to the longer stemmed pipes ranging from 10-12 inches and considerably larger leaning forward bowls and flat bottom known as the fairy, elfin or roman pipes; to the final form which more of an up-right positioned bowl with a Dublin orientation to it having that small knob in its heel and long stem ranging from 13 to 30 inch long known as the London straws or churchwardens in our days (Figure 1).

Tobacco smoking or what is so called tobacco drinking was a popular practice by the 15th century and thereafter between all society spectrums. Practiced by men's, women's and even children's; tobacco smoking was a fashionable yet a healthy life style necessity, mothers used to

pack a pipe full and place it with their children's lunch due to the strong believe in its beneficial value to their health. One thing about clay pipes made them so unique is that every smoker used to carry his legitimate accessories for pipe smoking including his tobacco pouch which is decorated with different pattern of jewels or a smile pouch made from plaid cloth as well as their pick and fire source whether a twig, match or a burning coal from the camp fire but the pipes are the same for rich and poor people elders and youngsters it was always a simple clay pipe smoked for few times and replaced when broken, lost or blackened by the act of the tobacco juices. Every one was equal in a way and pipes were affordable for every one to purchase and they were mass produced which made them even more available. Now a days clay pipes are rarely used between modern smokers, however pipe collectors and tobacco smoking enthusiasts always keep one or more in their collection for display or use purpose.

The clay pipes, Being a cheaply produced pipes is most certainly an advantage to the pipe smoker who concentrate on durable use for a cheaper price, and due to the flexibility of the clay many different designs are available for the smokers to choose from and some of them can seriously be an artistic ones. despite being simple, clay pipes are in fact great smokers, due to the sold surface of the clay it maintain a constant container for the burning tobacco without interacting or impart any foreign flavoring which made them ideal pipes for tasting the tobacco. However this characteristic might limit their ability to absorb the excess moisture produce by the burning tobacco which make them bitter tasting and foul smelling on longer intervals of usage and tend to collect moisture at the bowl heel which many smokers dislike. Their fragility is another drawback to their performance as well as in any occasion of an unfortunate event where your pipe might fall on a rough surface it might shatter in many pieces and be somewhat difficult to re-attach and that was actually one of the reason for the long stems for these pipes so the smokers keep smoking the pipe even when the bit or stem is fractured until it becomes a nose warmer pipe and then disposed for a new one to be purchased. And last but not least since the whole pipe is made from clay the bit is some what appeal for few smokers to be odd tasting since you will be biting directly on the clay it self which made some of the makers apply a red dye to the bit where the lips are located to prevent such occurrence.

Clay pipes as mentioned above were mainly excluded due to their fragility and for few other reasons mentioned above however they still worth possessing and even giving a chance to be

tried. In other parts of Europe like France and Holland the use of porcelain or china clay was the contradict use to the clay however they both share the same Pros and Cons and their use where diminished by the presence of other suitable alternatives (Figure 2).



A



B

Figure 1: A) traditional cutty clay pipes the two white colored are un-used and you can notice the difference to the smoked third one and how the clay is darkened in age especially on the bowl. B) clay pipes can be attached to bamboo stems and designed by precious stones as well.



A



B

Figure 2: A) un-smoked porcelain tobacco pipe from Holland in comparison to B) Malaysian Boreno made porcelain pipe hemp pipe.

3. Meerschaum pipes

The use of clay and porcelain in making smoking pipes lasted for many years however in one day this material where replaced by a mineral called Meerschum which is a german word stand for “sea-foam” since this porous mineral was floating on the sea surface. Meerschum was used for centuries before the discovery of tobacco and smoking concept in general however it was mainly used for making different kinds of statues and jewelry due to its appealing shape and its ability to uptake colors applied to its surface and foremost the easy profile for this mineral to work with and shape upon the carver desire.

As for the use of meerschum in pipe making, it was foretold that in the 17th century a high class personal in the Budapest society has brought from his travels in the east a two blocks of a white unknown material to a shoemaker and carver known as Carl Kovacs to see whether he can make a valuable ornament from. However after Carl examination to the material and its porous nature and light weight and the ability to be shaped easily he thought of using it as a smoking pipe and when he proposed the idea to its owner who was a smoker him self an instant agreement where made and Carl carved two pipe one for the owner and the other kept for him self. While he smoked the pipe he noticed that the pipe started to color in certain areas covered by cobblers wax from his dirty hand, then he only concluded the idea to cover the whole pipe with that wax to end up with a gracefully colored golden brown pipe due to the juices that is resulted from the tobacco it self.

Meerschum was by no mean a pipe for a modest man, and it was smoked by the high class people whom bring the meerschum blocks and pay for a well known artist to carved them and attach a pure amber stem to them to become a valuable acquisition eventually. While average person, will keep on smoking his own trusty cheap clay pipe.

Meerschum is an artistic pipe by all means and foremost the greatest feature to these pipe is due to their porous nature they tend to absorb the excess juices from the burning tobacco and evaporate them into the surface however these juices will eventually color the mineral and change its color from white to yellow and golden brown then to dark brown to end up with burgundy color as the last stage (Figure 3). This porous nature was in advantage of making the pipe smokable for many time a day and always smoke fresh tasting with no flavors imparted

from previous tobaccos and also contributed to light weight these pipes are famous with, although recent meerschaum makers and carvers started producing pressed meerschaum which is a combined material that doesn't color that well and be relatively heavier while the block meerschaum is well known for its light weight that some times the bowl is lighter than the stem. Nevertheless a one drawback about this material is their fragility and like clay and porcelain pipes any excessive external force will cause the pipe to shatter, in addition that coloring might be taken from the outer surface just as well as the inner one if the smoker hand where dirty and that might leave unpleasant look to the pipe that counter the normal coloring procedure. Nevertheless it is always been said that a pipe smoker collection is never complete with out a meerschaum in it, and to my believe it is one of the greatest smoking pipes materials chosen.



A



B

Figure 3: A) Meerschaum pipe made in Turkey with an amber stem “Sultan head”. B) The coloration stages of the meerschaum from top it’s an un-used meerschaum pipe white colored while yellow is being the next ones color, the last ones are golden to dark brown.

4. Metal pipes

Metal pipes were known and mostly used in the by the Asians, and although many varieties were found for these pipe and many designs were modified, however like the Kiseru pipe they all shared the main character of having a metal bowl. These pipes were used for smoking other kinds of herbs like the hemp and opium and due to the impact these kind of herbs leave

upon the smoker, the bowls for these pipes were relatively small that can out last the smoker for few whiffs only and no difference was made in the case of being made for tobacco usage (Figure 4).

These pipes were more often decorated with different carving and precious stones reflecting a very stylish practice, and observed in few designs a long stemmed pipes where it is impossible for the smoker to light his own pipe and it have to be done by a companion or servants especially assigned for such purpose which even adds more luxurious feeling to it.

The metal pipe where solid and durable indeed and one need not to worry about their fragility and smokers used to carry them in their belt like swords although in times it can be measured as the same and even longer. However their heavy weight made that a negative feature that limited their use to these special smoking sessions and smoking in metal bowl will defiantly impart a non desirable taste to the smoking noticed by many users, in addition these pipes being made of metal the get hot very fast and although replacements and modification of wooden stems where made to ease the process of holding them was made however many drawback made these pipes restricted to certain areas of the world being practiced as a tradition rather than a practical choice and limited their distribution around the world.



A



B

Figure 4: A) Opium Chinese metal pipe. B) Kiseru, Japanese metal tobacco pipe.

5. Cherry wood pipes

Being realized that wood is one of the most convenient materials to be used for pipe making cherry wood pipe making was chosen and practiced by the Europeans especially the French. The ability to prove a pure taste and the availability of this wood made it popular at times where clays were too fragile to be used as smoking pipe and meerschaums were too expensive to be collected.

Nevertheless this kind of wood provides a less flexible material to work with and gave narrow choices to the ultimate shape the pipe will take. A rough texture of a poker or barrel shaped bowl was always related to cherry wood pipes until a certain pipe design was named after them (Figure 5). In addition to this obstacle in enhancing their beauty the cherry wood pipes were not as durable as the clays or meerschaum and often burned out after long usage, nevertheless it was a decent and cheap available alternative for pipe making. One of the factories well known for producing these pipes was the ROPP factory in France which sadly closed their business at the nineties of 19th century. However, few other carvers and workshops still manufacture these pipes yet they are not preferred as the pipe of choice for many smokers.



Figure 5: Cherry wood pipes French made ROPP, the two dark brown pipes below being called by cherry wood designed pipes and similar name will be called on any other material pipe shaped into the same design.

6. Corncob pipes

A young German farmer residing in America thought about the necessity of a cheap, available and yet good smoking pipe made him chose the corn cobs as the next alternative for pipe making. Utilizing its light weight, porous nature, availability and very cheap production value corn cob pipes became and still is one of the most popular forms of materials used in smoking pipe making.

At the 18th century he was granted the patent for the making of these pipes and he related the porous nature of these pipes with the similar character the meerscham pipes do have and the place he lived in which was Missouri producing a label for his product namely Missouri Meerscham corn cob pipes which is still used for his company until our recent time. Many factories started imitating these pipes and researches where done on the development of bigger and more durable corps resulting in bigger capacity of the pipe bowl for tobacco intake. Now the only producer for these pipes is the very first patent granted factory MM corn cob factory located in Missouri Washington in the Unites states.

Many smokers take the corn cobs as the ultimate choice for tobacco smoking and for the few reason I will mention I guess no one can disagree. Being almost the cheapest pipes on the market pipe smokers buy them by the dozens and once one is broken or lost other will replace it in no expense to be mentioned and that's why they call them the fisherman best friends. Secondly due to their porous nature that made them perfect for tobacco tasting and every day smoking as well as they never impart flavors from the previous smoke nor retain the moisture for long periods. Their light weight made them very practical for carrying around and working with without emphasizing a heavy pressure upon the jaw or teeth like other pipes do. The only drawback observed in these pipes is that they don't last u forever as fast smoking can burn out the cob plant rapidly and over time the cob start to swell due to the saturation with all the juices produced by the burning tobacco and will eventually crack (Figure 6). Another negative aspect to few pipe smoking enthusiasts s the general rough look to the pipe that is not an eye pleaser for every one and that's why they keep away from collecting them. Nevertheless with all the facts mentioned above I guess every pipe smoker should own one for the times where risking your valuable pipes in inclement conditions is not a choice.



A



B

Figure 6: A) Two Missouri Meerschaum corn cob pipes the one on the left being un-used and you can observe how the outer bowl is still intact and light colored, while the one on the right is darkened and swollen due to saturation with the burning product of the tobacco. B) Bird view for the pipe bowls from an up-right position to observe the thickness in diameter, the second pipe is about to be retired. (the pipes are of different design indeed but the difference is obvious)

7. Briar pipes

Being called as the smoking pipes king, the Bruyere or so called Briar in the modern industry earned the title. A durable, life long lasting and artistic pipe is a compliment of all the good features other smoking pipes material had; it is beyond doubt the first choice and beloved acquisition for each and every pipe smoker regardless to all preferences.

The story behind the discovery of the Bruyere was based upon the old saying “Necessity is the mother of invention”. It had been said that a one French pipe maker once visited the Mediterranean island of Corsica, Napoleon's birthplace as a part of religious cult based on worshipping the emperor Napoleon. Needless to say this carver took one of his precious meerschaum pipe along with him to fulfill his passion for tobacco smoking however luckily for generations to come he broke his pipe and remained without a way to respond to his tobacco needs so he went to a one local carver and asked him to provide him with a decent pipe of durable

material. The carver as agreed made him a pipe from Bruyere which astonished the French carver by its elegance and smoking characteristics.

The French carver took a sample of this tree and presented to the carvers back in his home town Saint-Claude whom they were known for being excellent wood carvers. Development of the industry took a fast and major turn in the smoking pipe make-shift thereafter, soon these pipes were introduced to the rest of Europe, England and America becoming the favorite choice for every pipe smoker. The Bruyere heath tree grows in the Mediterranean region and it takes the tree burl a 125-200 years for proper seasoning and firm grains to be formed and the older the age is the more valuable the plant will be and the more superb qualities it will provide concerning carving and shaping of the smoking pipe (Figure 7). Recently Algeria started farming the Bruyere and decent products were resulted with a competitive price however the early farming time they do practice most certainly decrease the crop quality.

Briar pipes are beyond criticism that I guess we all agree upon due to their durability, mellow smoking character it provides and elegance in concern to the designs it can be shaped into or the grain pattern it can exhibit, However as mentioned earlier nothing is complete. Although briar pipe do share the evaporating character with the meerschaum however due to its tight grain and wood consistency the evaporating speed is less than meerschaum or corn cobs and if the moisture retained within the bowl reaches high level the pipe will start to smell foul and taste bitter and further complications will follow and that's why it is advised that the briar pipe should be smoked once a day to allow proper cooling and drying time "although in my personal experience I find that statement is exaggerated". One other feature that might cause a certain inconvenience is that due to the absorbing qualities of the wood and the slow evaporating motions of the liquids and aromas being passed by the wood fibers the pipe that is used to smoke certain blend start to absorb the aroma and taste of that specific tobacco and might impart what is called as ghost flavors which affect the smoke qualities and for that limitation care should be taken when switching from aromatic to natural or English blends in the same pipe to avoid such phenomenon.



A



B

Figure 7: A) classic Dunhill straight billiard saddle stem sand blasted shell briar series. B) Erik Nording free-hand pipe limited edition.

8. Mixed material pipes

For the great qualities that pipe smokers want to attract to their personal choice and for bad features they want to reduce or eliminate, pipe makers started mixing variety of material to come up with the ultimate design that gives satisfaction and solace for every smoker. However, like other designs and materials they do have their own flaws but it is interesting to examine these pipes briefly.

8.1. Calabash gourd pipes

The first image to be recalled by some ones mind when seeing this particular design is the famous detective Sherlock Holmes although the actual fictional character invented by Sir.Arthur Conan Doyel never mentioned calabash pipe as Sherlock holmes preference. Unlikely, it was wooden, and clay pipes mostly, however the use of these pipes was featured in the cinema and TV shows featuring this character to include a pronounce presence and the assumption made is that because of their light weight they allow their smoker to work freely with his hands which Sherlock Holmes character needed.

The gourd calabash pipe is composed from parts the stem, the gourd body and the meerschaum cap. Different materials were used in these three parts whether clay, porcelain or meerschaum in the cap; vulcanite, Lucite or amber in the stem; gourd, briar or recently Mahogany wood from Africa (Figure 8). However, the main concept of the pipe function is apparently the same where the tobacco is placed in the cap and then the smoke will be drawn into the cooling chamber where a big curved gourd body helps in cooling the smoke and getting rid of the moisture and finally the dry mellow smoke will be drawn to the smoker through the stem.

Although for their huge size a one will think that calabash pipe takes a lot of tobacco or massively heavy on the jaw, but neither is true. The cap capacity is limited indeed and it doesn't extend through out the whole gourd body. While for the size, the fact that the gourd is hollowed it is very light in weight and the bent orientation helps moving the gravity center of the pipe closer to the jaw where it is easier to hold. Calabash are perfect combination of different characters however it remains as a pipe to enjoy in the leisure of your own home and not a suitable pipe to work or walk with due to its size and odd look. Nevertheless it is without any doubt my personal favorite pipe.



A



B

Figure 8: A) From top-down the first is meerschaum/mahogany vulcanite bit calabash, the second is meerschaum/gourd amber bit with silver mount calabash and the third is porcelain/gourd vulcanite bit briar mount calabash. B) The hollow gourd body and the Meerschaum cap coloration.

8.2. Meerschaum lined Briar pipes

Combining the briar qualities with the cool smoking features of the meerschaum is another good combination. However, the fact that the meerschaum outer surface is concealed within the briar limits the ability of this mineral to get rid of the compiling moisture, but one thing for sure is these pipes rarely tend to heated with smoking due to the combination of both elements and the separation of the direct attachment of burning tobacco with the briar walls (Figure 9).

Nevertheless, extra care should be taken in cleaning the pipe and removing any forming cake inside the pipe” which is essential so the moisture forming inside the bowl will find its path to the outer bowl surface without obstacles” so damage to the meerschaum bowl will not happen.



Figure 9: Meerschaum lined straight acorn saddle bit briar pipe made in Italy “white hall”, it can be observed how the meerschaum insert started taking up yellowish coloration through out the time.

8.3. Falcon pipes

Pure physics in the service of the contemplative smoker, that’s what I always say in the favor of the falcon system. It utilize the smoking qualities from a briar bowl with a heel of metal to help condensing the moisture which can be cleaned out easily by unscrewing the bowl open even during the smoking session, and a spiral metal shank which force the smoke to travel further to be cooled and mellowed with maximized chance of condensation along the way (Figure 10).

The result was a cool smoking, light weight and cheap smoking pipe, with the possibility to change any bowl you like for another since all the stems and briar bowls of standard size and all interchangeable which make u save more by buying different bowls and one stem only and by changing the bowl you will be assembling your self a new pipes to impress others with and to get a fresh smoke from.



A



B



C

Figure 10: A) Untied Kingdom made Falcon metal pipe with a Dublin bowl and bent stem. B) disassembled flacon pipe showing the interchangeable bowls and the aluminum stem and spiral shank it do posses. C) Myriad of different metal pipes from top Filto, Falcon and Bryson.

8.4. Aristocob pipes

Like those meerschaum lined briar a similar concept was used by the company named Aristocob whom had a patent for their work which included the use of metal bodied pipe with a bowl lining of corn cob.

Just as discussed earlier both elements have good qualities but unfortunately instead of a collaborating effort one will be affecting the other work as the metal will surround the cob and prevent its proper drying and the cob will swell and heat the metal faster and might even cause extra pressure on the metal bowl causing further damage to the pipe. However they were better than the meerschaum lined briar pipes by the fact that these cob inserts are interchangeable and can be disposed to be replaced by new one (Figure 11).

In despite to these drawbacks many liked this design it became popular for a while that Missouri Meerschaum Pipe Company merged them in their line. However request upon these pipes gradually decreased causing them to shut down that production line and the few Aristocobs left in the market and their cob insert are the last to be produced.



A



B

Figure 11: A) Assembled Aristocob pipe. B) Disassembled Aristocob pipe showing the cob insert and the screw in metal rim that goes on top of the bowl to protect the insert.

Ahmad Sadik Al-Janabi., 2009.