

A Study of Traditional Jeju Onggi and Jeju Stone Kiln

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This study is for looking into the developmental process and the feature of Jeju tradition ceramic by studying jeju onggi and Jeju tradition stone kiln based on “The Study of Jeju Onggi” written by a professor of Jeju University and a ceramic artist Oh changyoon

He has written several theses related Jeju onggi and Jeju traditional stone kiln and tried to combine physical properties of basalt and image of Jeju traditional ceramic by constructing Jeju traditional kiln by himself and fairing his works Jeju onggis in it. Thus he has examined to put the nature of Jeju into his onggis by using tactual feature of basalt.



He believes that design creation is not simply to come out but to evolve and develop over time as acclimating to various surroundings such as culture, climate and natural features. He also thinks that the culture-original form of Jeju including the unique nature and the life custom of Jeju has various Vernacular components and the diversity of design can be produced from it. Actually he has expressed Vernacular Design in his works Jeju onggis by using volcanic stone. This attempt is to succeed the tradition of Jeju onggi and shows the applicability of new change. This is one of new suggestion in the ceramic culture development of Jeju Island.

The natural and environmental feature of Jeju Island

Jeju Island designated as a World Natural Heritage Site by UNESCO is the biggest island located northeast of the Korean Peninsula and a volcanic island. The natural and geographic environment of Today's Jeju island was made by a lot of volcanic activities.

Jeju island is comprised of basaltic over 90% of the gross area and there are many parasitic cones formed after the activities of lateral volcanos of a lake



on Mt. Halla, the mouth of a volcano. Based on this natural environment, a special Jeju Ceramic Culture has been developed with peculiarity of the soil of Jeju, weather, nature and life style. A volcanic island Jeju is composed over 360 lateral volcanos around Mt. Halla. Jeju is made up basalt. So, rainfall runs the underground of the layers of basalt and river-bed water flowing a lava bed spout out. Most streams are dry streams. These natural circumstances has influenced to develop various onggis as well as life style.

The Special quality of Jeju soil

The soil of Jeju is composed of dark brown soil, red-yellow soils, gray-black soil and scoria. Jeju soil is grayish brown and volcanic ash soil covered 70% of Jeju island and gray-black soil is distributed in south and northest area of Jeju. Rest 30% is non volcanic ash soil like land soil and dark brown soil and red-yellow soil featured characterized low iron content and salinity compare to other area of Jeju. This soil is used for making onggi.

Scoria is a kind of Pyroclastic material and vesicular dust made when a volcano explode Magma quickly generates bubbles and is explosively released and called ‘songye’ in Korean. Scoria is distributed around Oreum, parasitic cone.

Because of high viscosity of Jeju clay, vessels get damaged by fine clacks during dry. Therefore Jeju clay is not suitable for big vessels. The process of making onggi in the past it was needed to slowly dry onggis in a dugout for 6 months blocked sunshine and wind out before firing them. Containing iron of Jeju clay is important factor of surface color of Jeju onggi and good at Self-color anodic oxide coating. Firing ways influence the color of onggi because of thixotropy. There are many different colors due to the delicate variation of temperature according to firing ways.

The Features of Jeju Onggi

Jeju island is a place where type of Gosanri earthenware, which is earliest time of the new stone earthenware in Korea, are discovered. In Jeju Ceramic culture started in the new stone age earthenware there was no pottery under the influence of geological features. However there were appliances made Jeju soil.

Onggi, is a common name of earthenware which is coarse and lusterless because of firing without glazing and pottery according to dictionary definition. Jeju Onggi is also a common name of pottery which is partially glossy and red firing in a stone kiln without glazing and earthenware which is black gray and made by passing smoke in a kiln.

Jeju onggi called Jeju traditional earthenware made using only Jeju soil and fired in yellow kiln cover 1100°C in Jeju traditional stone kiln. This onggi has been developed characteristic Jeju onggi culture with different color compare to other onggis made in inland.



Jeju onggi shows a good natural color formation and various colors according to subtle differences of temperature. It comes from soil, natural glaze and firing way. The factors of color of Jeju onggi are Jeju soil containing iron content, the differences of temperature between low and high place in a stone kiln, the kind of firewood, shell and the variability of firing process. Thixotropy by firing way caused the various colors of Jeju onggi.



Some merits of Jeju onggi are excellent breathableness, various and natural colors of surface. Although Jeju onggi is non glaze firing, it is glossy like glazing because of the features of Jeju soil containing lots of iron and the phenomenon of sticking ash to surface of onggis as firing. One of the strong point of Jeju onggi is inhibiting of the propagation of germs because Jeju soil is volcanic ash soil containing various minerals and far infrared and the special making process of onggi. Also Breathableness of Jeju onggi is good at fermentation of food in the onggi. It is very well fit with Korean fermented food culture

. There is a difference of wood in firing way compare to other onggi. The way of firing in Inland areas is using only firewood. In contrast, It is a distinguishing mark in Jeju that sumpi, which is a fagot of miscellaneous small trees with fall leaves as well firewood, is used at stone kiln in firing. In firing in Jeju, firewood is used until some temperature and then for main firing sumpis are continuously put through fire hole. There is sent out lots of smoke and thixotropy when sumpis are used in firing. As a result partial reduction is formed.

Lastly, Jeju ceramists put shells among onggis to prevent clinging to each other. Actually the salt stayed of the shells influenced thixotropy of onggis.

The types and Feature of Jeju Stone Kiln

Jeju soil is most vesicular basalt. The point that Jeju is a volcanic island brought a different type of culture. Jeju is called 'samdado' which means there are three many things in Jeju island, Jeju is famous with stone, wind and women.

'Stone' is a key word to understand Jeju culture as well as one of element characterized Jeju natural condition as a volcanic island. "Stone culture" is a basis of Jeju culture and 'Jeju tone kiln' shows it.

The structure, shape, size of Korean traditional kilns are different according to abiotic factor such as climate and food culture. According to firing purpose Jeju traditional stone kilns are made diverse and the material is also various. It is interesting and meaningful that the material of Jeju stone kiln as Jeju traditional kiln is stone. Jeju onggi as main stream in Jeju ceramic culture is fired in Jeju traditional jeju kilns constructed in a special shape.

A onggi kiln is built with Basalt. The basalt was created in the process that a volcano erupted

magma released in the air, the atmospheric pressure quickly reduced and volatility components in the magma were volatilized. As a result the stone Basalt came to have lots of holes. Basalt is light due to lots of holes and The specific gravity of Basalt is lighter than water so that basalt float on water. It's also an excellent fire retardant because it is already fired once when a volcano erupted and vesicular. Basalt can keep heat during firing and it's suitable for kiln due to the feature of heat resistance.

Jeju stone kiln built on slopes and is non chimney type. This type is unseen in kilns in inland. Windy environment created "bujangieangye" known as windbreak, built safe break between combustor and firing place to reduce damage. Instead of chimney a back hole was made at back of stone kiln. These are unique factors in Jeju stone kiln.

Jeju Stone kiln constructed with volcano rock is at the special uniqueness in the type of cave due all its own. Remained Jeju onggi stone kilns today are known as the world's only remaining stone kilns which can't be seen in other places in world ceramic history . There are three kind of Jeju onggi kilns according to the type of pottery and color which are yellow cave, black cave and roofing tile cave. In Korea a kiln is called a cave. The reason is presumed that the shape of kiln looks like a cave.

Yellow cave : It is called Yellow kiln because the vessels' color becomes yellow after firing



A yellow kiln has similar shape of traditional onggi kiln in inland and it is no exaggeration to say that Jeju environment brought the feature of Jeju stone kiln. Inside temperature of yellow kiln is 1200°C and the color of vessels after firing is yellow like put gold powder and red. This kiln fired jars and 'hurback' which is a kind of bowl.

Black cave : It is called Black kiln because the vessels' color becomes black after firing



The black kiln has used to make living vessels in black color. In the process of firing smoke is permeated into kiln when firing temperature is around 900°C. As a result the vessels' surfaces from the black kiln become dark gray or black without brilliance. The black vessels are created at the high point of temperature 1000°C and many different designs can be made according to the way of flame.

The black cave is also built basalt like yellow cave but it is a little different in size and construction. the vessels fired in black cave is better in breathableness than other kilns because of low firing temperature.

Roofing tile cave : It is called a tile kiln.



The roofing tile cave is similar type to black cave and built with basalt. It is used for making roofing tiles. In Jeju house was generally thatched type due to lots of wind. Tiled roofs used only temples and government offices. Therefore there was not much tile production.

Inheritance and Development of Jeju Onggi Tradition

As described above Jeju traditional onggi has kept and developed it's unique type based on the environment and life style of Jeju. But after 1960's as plastic vessels have been common the demand of onggi has been decreased and Jeju onggi culture also has been declined. Jeju tradition stone kilns were lost at this time.

The reasons of discontinuing the legacy of Jeju onggi are generalization of daily plastic commodities and thorough division of work in the production process of Jeju onggi. A few remained Jeju traditional stone kilns have been designated as Local Asset by the local ceramic artists and Jeju Island Government Officers who have been pretty anxious not to continue the legacy of Jeju onggi. Since 2008 the Administration and Seogwipo City in Jeju Island have tried to restoration of Jeju onggi culture and hold Jeju Onggi Kiln Festival annually. By these efforts Jeju Island has tried to lead to the participation of local residents and visitors.

Jeju!

A symbol of barren land. In there Jeju ceramic artists dreaming a new cultural creation are seeking the modernization of Jeju ceramic culture through soil and study of design and working hard to develop Jeju onggi culture as a specialized region culture business.

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