

April 2022
Tayca Corporation

Completion of piezoelectric single crystal factory in Tayca Osaka Factory
and development of new processing technology

Tayca corporation hereby announces that a new factory building for piezoelectric single crystal has been completed at the end of January 2022. Besides, we inform that we have developed new processing technology for piezoelectric single crystal.

1. Completion of piezoelectric single crystal factory building

(1) Outline

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| ① Product: | piezoelectric single crystal |
| ② Address: | Tayca Corporation Osaka Factory
1-3-47 Funamachi, Taisho-ku, Osaka, Japan |
| ③ Site area: | 351 m ² three story |
| ④ building structure: | Reinforced concrete structure |
| ⑤ Capital investment: | About 1.5billion JPY |

(2) Background of new facility establishment

Demand for high quality product is increasing in piezoelectric market, today. In January 2018, Tayca Corporation acquired TRS Technologies, Inc in the U.S.. which has superior piezoelectric related technology, and we have enhanced our production technology, together.

Our new factory has been completed, which allows us to have an integrated production system from raw material to processing and single crystal parts completion.

We add single crystal to our lineup in addition to piezoelectric ceramics which was selected as one of the 2020 Global niche company top 100 (GNT 100) by Ministry of Economy, Trade and Industry of Japan, and our products meet wide variety of requirement in the market. In collaboration with new processing technology (mentioned later) and development of new generation technology, we will continue to work to expand our market share for piezoelectric products and to provide high quality product to our customers, stably.

2. Development of new processing technology for piezoelectric single crystal

We have provided piezoelectric composite products combining resin with piezoelectric ceramics to wide variety of applications including ultrasonic diagnostic devices, Non-destructive Testing devices and sensors.

However, single crystal composite had a difficulty for processing process and cost, and has not been implemented, yet. We have developed new processing technology for composite product which enable us to supply single crystal composite with lower cost.

3. Development of new generation piezoelectric single crystal

There are mainly 2 kinds of piezoelectric single crystal for ultrasonic diagnostic devices in the market. Binary single crystal called PMN-PT which is composed of Lead, Titanate, Niobate and Magnesium, and Ternary single crystal called PIN-PMN-PT whose component is indium in addition to that of PMN-PT. Binary single crystal has a limitation of usage as the coercive field is lower than piezoelectric ceramics, and ternary single crystal which has higher coercive field does not have as high relative permittivity as binary single crystal.

New generation single crystal which overcomes weakness of PIN-PMN-PT is under development by our piezoelectric material group. We are planning to start introduction of this new single crystal to our customers in 2022.