



OKAYASU RUBBER

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Breakthrough for Mono-zukuri/Making

Realize wants of "Change"
Okayasu Rubber Co., Ltd.

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OKAYASU

Realize wants of “Change”

For nearly 90 years since our founding, we have continued to supply products using chemical materials, mainly rubber parts.

The rubber component supplier that we belonged to at that time was too small to meet the demand.

Our company was founded as a trading company but changed to a manufacturer and then has continued making efforts to introduce new technologies including those from other industries, leading to the current reputation as a reliable, distinctive manufacturer.

We have been changing while keeping the venture spirit and prompt actions in mind, which has led to successful overseas expansions in Malaysia and the United States, and business diversification into other types of products in addition to rubber.

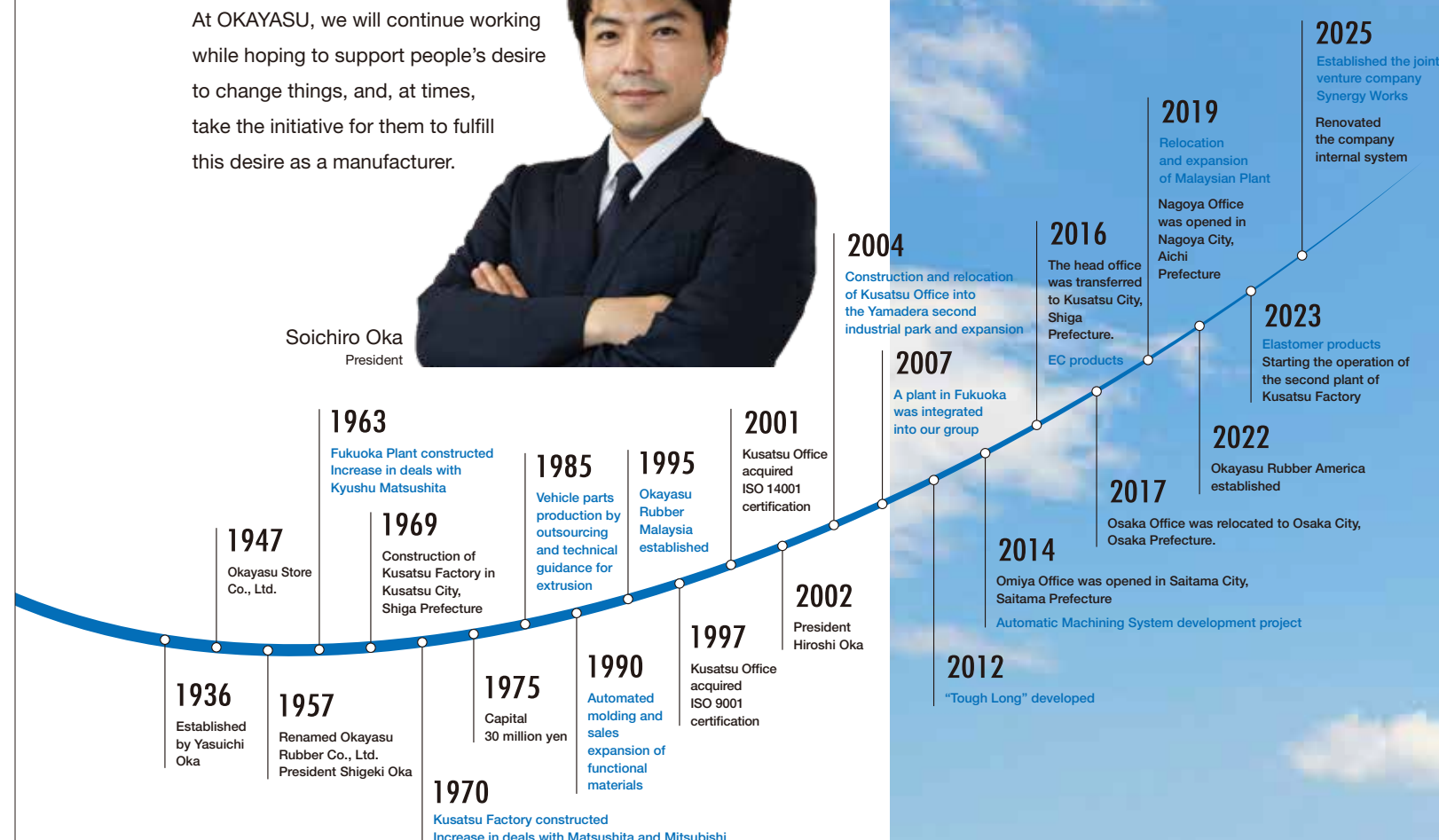
Our company's present reputation is attributable to our everlasting business philosophy that helps such customers who desire change

but are not sure how to bring it about.

At OKAYASU, we will continue working while hoping to support people's desire to change things, and, at times, take the initiative for them to fulfill this desire as a manufacturer.



Soichiro Oka
President



Vision

—Vision—

Company associates, business partners and all other members of society
achieve three types of happiness



Value Breakthrough for Monozukuri/Making

—Value—

Mission

—Mission—

Realize wants of “Change”

Culture

—Culture—

Speed and efficiency are our essential properties

Questions and awareness are our forte

Improvement and challenging spirit are indispensable for our success

Delights shown by the post-processes are our pride

1. Support and reward all people who are willing to face challenges regardless of their age, gender or personal history

2. Pursue highest speed and efficiency to shape as many ideas as possible

3. Value connections with people and society, and respect people who care about others.

We are flexibly responding to customer

requests to make breakthroughs.

Breakthrough Point

Developing our own automatic adhesive machine for mass production of endless products

Case. 1 Blower motor seal

<Application> Water packing piece for automobile air conditioners

"Customer need/problems"

- Some customers complained that flat rubber packing piece made by punching was too hard to protect water from leaking.
- We need large lots of sponge rubber endless products.



CUSTOMER ACTION

1 Requirement

Okayasu Rubber had been supplying EPDM sponge as a sealant and wanted to adopt the same sealant even after the end user's specifications were changed. Quality requirements included those for peeling strength, sealing performance and heat resistance. A mass production system that is large enough to meet the year-by-year increasing demand should be established as soon as possible.

3 Evaluation using samples

Water leakage occurred where the adhesive was forced out and hardened. Evaluation result: No Good The hardened adhesive caused a gap to be produced in the packing mating part, leading to water leakage.

Feedback

5 Evaluation using samples

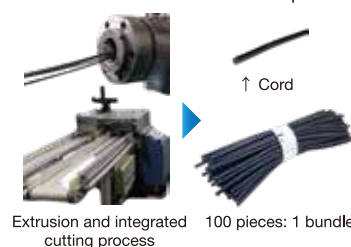
Testing samples showed a satisfactory result.

6 Production process review

<Manual adhesion using a jig>

Roll production

While producing a cord of sponge rubber by extrusion, it is cut into sections. Make a bundle of 100 pieces.

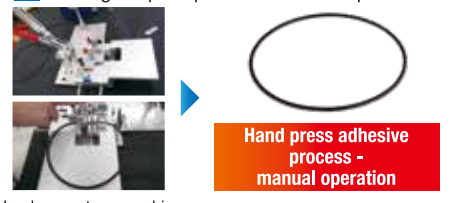


Extrusion and integrated cutting process 100 pieces: 1 bundle

Challenges Minimize the step made between adhered sections.

Hand press adhesive process - manual operation

Daily production of 150 work pieces per 8 hours/day operation
All operations of clamping both ends of each piece of sponge rubber, applying adhesive and operating the lever clamp are completely manual.
→ Forming the principle of the adhesive process



Hand press adhesive process - manual operation

7 Start of mass production

Developing a semiautomatic system using

Roll production

While producing a cord of sponge rubber by extrusion, it is cut into sections. Make a bundle of 100 pieces.



Extrusion and integrated cutting process 100 pieces: 1 bundle

Challenges Improving production efficiency and quality

Turntable-employed adhesive process - semiautomatic operation

Daily production of 450 work pieces per 8 hours/day operation
Sponge rubber is set in the jig, and the holding tool is operated by a foot pedal. Start gluing by pressing the start button. Estimate the process capability that affects the peeling strength.



Turntable-employed adhesive process - semiautomatic operation

OKAYASU ACTION

2 Developing an adhesive

Instantaneous curing of adhesive was required for mass production. There was a problem that EPDM material itself was generally difficult to adhere. First, a conventional instant adhesive being used for EPDM materials was submitted and studied.

4 Developing an adhesive

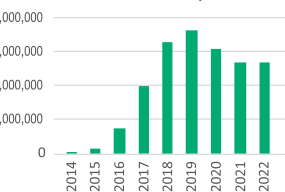
Cooperating with adhesive manufacturers, we developed a special adhesive. Post-curing hardness of adhesive was reduced; and adhesive holding time was reviewed. Peeling strength test, water leakage test and aging test were carried out by our company. Submitted samples.

CUSTOMER ACTION

9 Production statistics

Increasing mass production

<Statistics in annual production>



Year	Production/ year	Total production (length in m)
2014	1,500	740
2015	132,639	65,660
2016	710,891	351,890
2017	2,004,962	992,460
2018	3,299,032	1,633,020
2019	3,652,868	1,808,170
2020	3,080,448	1,524,820
2021	2,697,115	1,335,070
2022	2,696,909	1,334,970

OKAYASU ACTION

10 Increasing production

Production efficiency

Development of<Automatic adhesive machine>

Roll production

Sponge rubber is automatically wound on a drum.



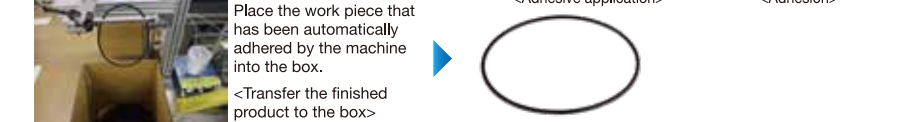
Automatic winding

Automatic adhesive process - automatic operation

Daily production of 1,800 work pieces per machine per 22 hours/day operation
Set the material roll drum in the automatic machine. Cut the roll, apply adhesive, and adhere sections to produce the endless product. Unattended operation



Automatic adhesion Measure and cut the rolled material by the automatic machine. Automatic application of adhesive using a machine <Adhesive application> Automatic adhesion using a machine <Adhesion>



Automatic adhesive process - automatically adhered work pieces

Quality control (Final inspection)

Inspection process

Manual

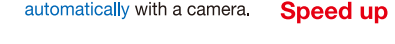
Visually inspect the upper and lower limits of the adhesive inner diameter using a jig. Using a jig, check that the number of work pieces per bundle is 25. Pack 100 work pieces in a bag.



Count the number of work pieces in groups of 25.

Automatic

The inner diameter of the adhered section and the number of work pieces processed are measured automatically with a camera. Speed up



Production

Breakthrough

Previous production

- A piece of solid flat packing was used
⇒ Water leakage
- Producing the endless product uses manual adhesion to connect sections, with no mass production being available.



Conventional flat packing (Conceptual image)

New production

Production capacity

Manual adhesive operation: 150 work pieces/day
8 hours operation
3 times
Turntable-employed semiautomatic process: 450 work pieces/day
8 hours operation
4 times
Automatic adhesive machine: Daily production of 1,800 work pieces/day/machine
22 hours operation

12 times larger

Realize wants of "Change"

Automatic adhesion between sections of an endless part
Successful Mass Production!

*The turntable-employed automatic adhesive machine was developed in cooperation with the companies that participated in the exhibition, not by Okayasu Rubber only.

We are flexibly responding to customer

requests to make breakthroughs.

Breakthrough Point

Proposal for switching from [Mold-employed forming] to [Continuous extrusion forming]

Case. 2 Protective bushing

<Application> Reduce vibration of the outdoor unit of an air conditioner

"Customer need/problems"

- They desire to rationalize the components of the outdoor unit of their production lines for cost reduction and process improvement.
- They want us to propose improvement plans, since they don't know how to do it.

Extrusion:
The continuous extruding process gives the work piece a uniform cross-section.

— CUSTOMER ACTION —

1 Requirement

The customer desired to rationalize the components of the outdoor unit of the production lines though they didn't know what could be improved. The customer asked Okayasu, a component supplier, to visit the production lines and advise modification proposals.

— OKAYASU ACTION —

2 Internal review

We visited the customer's production lines of the outdoor unit. We decided to propose a modification of the pipe securing protective bushings (the part is used in large quantities so a great improvement can be expected).

(1) Change of part's geometry: Forming with a mold → Extrusion

An alternative geometry, that can be obtained by using an extrusion process, is available as far as the part can meet the requirement that it shall protect the object (copper pipes) from vibration. If this is the case, the present mold-employed forming method can be replaced with an extrusion process.

→ Extrusion can give the work piece a uniform cross-section. Unlike extrusion processes, the process of forming a material with a mold can produce a complex form such as those with horizontal grooves on the surface.

→ Ribbed geometries were studied. → Part drawings were prepared internally.

(2) Copper pipe corrosion

Since the part is used for fastening copper pipes, it must not corrode copper pipes. Unlike the forming method with a mold, the extrusion process cannot be associated with peroxide crosslinking, so that low-sulfur materials have to be used.

→ Modified compounds were studied internally.

*Peroxide crosslinking: a sulfur-free crosslinking method. Crosslinking using sulfur may give rise to copper corrosion.

*Vulcanization is a process of crosslinking a rubber by using sulfur.



3 Discussion

Discussions for modification of part geometries and use of low-sulfur material.

5 Material sample evaluation

Low-sulfur material does not affect the copper pipe.

4 Material sample

A low-sulfur material sample was prepared and submitted.

6 Trial production

Trial production could be carried out at low cost.

*Example) Forming with a mold: manufacture of mold + trial production = From 1 million yen

Extrusion: manufacture of nozzle + trial production = Around 0.12 million yen

7 Discussion

The prototype was checked. Changing the production method to extrusion leads to a recess-less geometry of the part unlike that obtained by the previous production method, so that the part (band) may come off the piping.

8 Internal review

As a result of repeated in-house studies, the band was modified to a ribbed structure so that it can be kept secured to the piping. Proposal drawings were created and submitted.

— CUSTOMER ACTION —

— OKAYASU ACTION —

9 Discussion

It was decided to perform trial production again but with some design modifications that will need to be proposed by us and accepted by the customer prior to the trial production. However, since this part's vibration-damping performance depends on its weight, its manufacturing accuracy shall be controlled by weight, not by geometry.

10 Trial production

Due to the large discharge amount of material from the nozzle, the work piece was burred. The nozzle was modified so that the discharge pressure could be reduced.

12 Trial production

The part's form was modified so that it could have a larger number of ribs. The thickness of the part was increased by 2 mm to increase its weight.

14 Mass production

Since this part's vibration-damping performance depends on its weight, weight-based manufacturing tolerance control should be applied in place of dimension-based control.

11 Initial trial production and evaluation

The band came off the test assembly in the drop test. → Request for modification of the ribs' geometry. The part was too light to perform well as a vibration damper.

13 Second trial production and evaluation

The part was not affected by the corrosion of the copper pipe on which the part was fitted; and the part did not come off in the drop test. The part's weight is OK in terms of vibration-damping performance.

- (1) Copper tube corrosion: no
- (2) Drop test result: good
- (3) Weight: good

<Advantage> Annual production of 360,000 pieces

Item	Production system	Forming with a mold	Extrusion	Effect
Production capacity		2,000 work pieces/day	30,000 work pieces/day	Significantly raised
Finishing cost		2 yen	0 yen	Reduced
Lead time		30 days	14 days	Shortened
Total cost (%)		100%	84%	Reduced



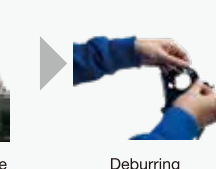
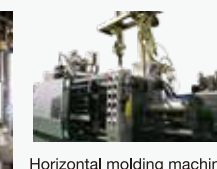
Forming with a mold

Previous production method

Forming with a mold requires a larger initial investment for manufacturing a mold ⇒ **Higher cost**

Longer time needed for manufacturing a mold ⇒ **Longer lead time**

Deburring operation ⇒ **Longer lead time and additional processing cost**



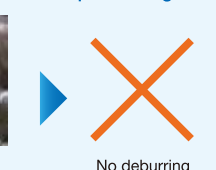
Extrusion

New production method

Extruder's nozzle is cheaper than the mold ⇒ **lower cost**

Time needed for manufacturing an extruder's nozzle is shorter than that for manufacturing a mold ⇒ **Shorter lead time**

No deburring operation ⇒ **Shorter lead time and reduced processing cost**



Conclusion

- (1) Changing to ribbed molding makes it possible to switch from mold-employed forming to extrusion,
- (2) Have a low-sulfur compound design and (3) Eliminate burrs by improving the extruder's nozzle

Realize wants of "Change"

Cost saving, process improvement and rationalization achieved!

We are flexibly responding to customer

Breakthrough Point

Okayasu Rubber's production technologies are available for integrating the primer coating and taping processes into the line (extrusion process).

Case. 3 Protector

<Application> Overfender for wheel arch (gap filler)

"Customer need/problems"

- It was an exterior part that remained yet to be coordinated with the surroundings in detail, so that mass production needed to be established with the minimum lead time after the specifications of the part were finalized.
- Four different types of parts: taped, total 42,000 m/month
- Extrusion process is carried out by other companies than those who are responsible for other manufacturing processes, which implies that it may be difficult to meet the target cost indicated by the end user.

— CUSTOMER ACTION —

1 Request

Low-cost, high-quality products would be delivered in time. Due to a shorter lead time to trial production, it would be started for all four different parts soon after our estimate is issued.

3 Trial production - order

Two days after receiving our estimate, trial production of the four different parts would be ordered. All of the four parts would be delivered in one month.

5 Discussion for trial production

Tier 1: Visited together. Advised that taping be performed in an integral manner in the mass production phase. Schedule adjustment.

6 Check before mass production

Detailed adjustments such as packing specifications. Products taped by the in-house process submitted.

— OKAYASU ACTION —

2 Internal review and estimation

First, extrusion + primer coating, followed by taping by outsourcing. For mass production, in-house taping has to be studied.

4 Trial production

After extrusion of four different types of parts, detailed adjustments shall be made for the nozzles. A primer coating jig was developed for integrated coating operation. Taping performed at the later process.

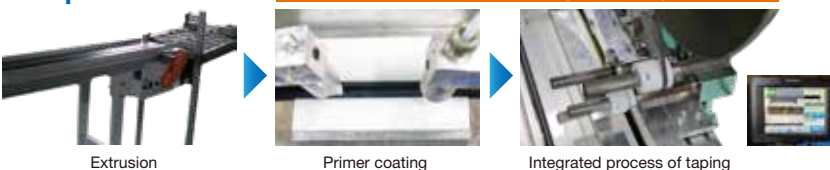
7 Preproduction preparation

Develop an integrated taping machine (our own design).
Install cameras that monitor taping that is out of place.

8 Production process

Integration of the post-processes

A single-line configuration of all pr



9 Mass production

Meet the QCD requirements - low cost, high quality and short lead time.

A single-line operation of all processes leads to achieving the target cost!

Realize wants of "Change"

requests to make breakthroughs.

Breakthrough Point

One-stop production system & Follow-up for process improvement

Case. 4 Butterfly quarter vent 2 kinds (black and gray)

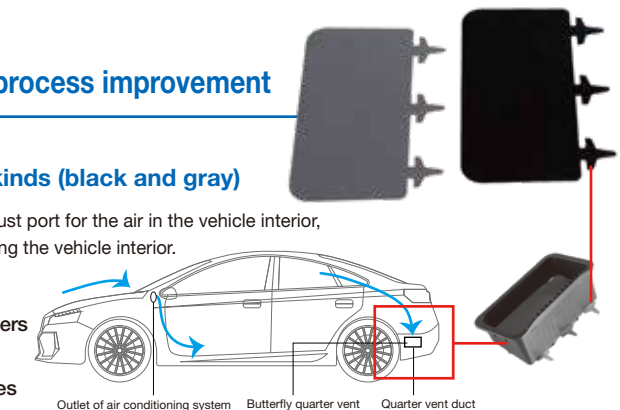
<Use> A butterfly is installed in the duct quarter vent, which is the exhaust port for the air in the vehicle interior, and acts as a check valve to prevent exhaust gas, dust, etc. from entering the vehicle interior.

"Customer need/problems"

- We have to respond to requests for cost reduction from end users

"Requirements"

- Focus on butterfly quarter vents being used in large quantities



— CUSTOMER ACTION —

1 Requirements for the product

Requirements for specifications (dimension etc.) and quality. It is necessary to evaluate the weather resistance using cold and heat cycle testing that simulates the actual onboard climatic environment.

Point

Rubber sheet manufacturers use large-scale manufacturing facilities leading to larger equipment costs and fixed costs. The thin rubber sheets also raise the cost. Commercial rubber sheets of standard sizes, different from the desired size, cause the yield to decrease.

— OKAYASU ACTION —

2 Internal review

Focusing on production processes and commercial flow.

Production process

<Previous system> Ready-made rubber sheets purchased from a manufacturer were transported to a processing company where they were processed and then delivered. Since the product is as thin as 0.3 mm or 0.5 mm, the processing cost is high, and the post-transportation process by other companies raises the cost further. Both these cost-raising factors can be eliminated by changing the processes to in-house ones.

3 Discussion

Internal processing

Using a wide continuous extrusion & vulcanization facility, extrude a thin rubber sheet whose width is appropriate for improving the yield, continuous punching. Cost reduction achieved by increasing yield and reducing transportation costs and processing costs. As a result, the product price was reduced by 15%. Cold and heat cycle testing was carried out using the test equipment of Okayasu Rubber.

5 Trial production - order

According to the discussion results, trial production was ordered.

7 Sample evaluation

Samples and all evaluation items could meet the requirements.

4 Internal review

Develop a compound material appropriate as a thin, wide rubber sheet for continuous extrusion. Modify the existing facilities so that they can be used for continuous punching of thin sheets. Develop an automatic machine for winding rubber sheets.

6 Trial production and test

Trial production using a two-sheet feeding system in place of the previous one-sheet system to improve production efficiency. Cold and heat cycle testing was carried out for the samples produced by trial production. Requirements for product dimensions and cold/heat weather resistance could be met. Parts produced by trial production were delivered.

8 Mass production

Two-sheet system → Automatic sheet winding → Continuous punching

10 Internal review

Study how to solve the problem of sheet-to-sheet sticking. The sheets in gray that did not stick to each other were chosen for study as a possible material.

11 Trial production

Eliminate sheet-to-sheet sticking. Test the hardness, tensile strength and elongation using sheet samples.

12 Trial production

The robot system can produce 1,000 work pieces as a trial production (the previous system required additional work for separating sheets and removing jamming once in 20 cycles of operation) The robot system is free of such errors. Successful VA through the follow-up after starting mass production.



<Advantages> Replacing the one-sheet supply system with a two-sheet system as a feeder of rubber sheet material led to a larger yield and smaller processing cost.



Realize wants of "Change"

Cost reduction with a one-stop production system
Process improvement via follow-up

Successful improvement!

We are flexibly responding to customer

BreakthroughPoint

Supporting quickest launch of new part production projects
Reinforcing a mass production system to meet increased demand due to a competitor's withdrawal

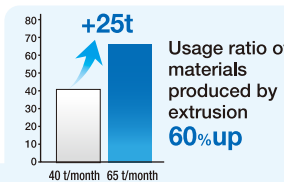
Case. 5 Cable protector

<Application> Automobile cable protector

"Customer need/problems"

- The current supplier of the protector withdrew from the business.
- Mass production has to be started within the shortest lead time.
- The price would be as close to the current price as possible.
- About 900 different types of parts totaling 325,000 m/month

Parts produced by extrusion: 40 t/month
New parts production expected: 25 t/month Ratio of parts made by extrusion: increase by about 60%
Production time required (for 24 hours operation): 301 hours/line (not including setup times and other preparation times)
(Example) Number of working days per month: 20 days - 480 working hours/line for 24-hour operation



- CUSTOMER ACTION -

1 Background and estimation

Partly because it had a current business partnership with Okayasu (supplier of sponge protector), the customer requested Okayasu to join the project. The customer requested us to supply quality products at low cost with the shortest lead time. Despite the shorter lead time to trial production, we have to prepare estimates for 900 different products.

4 Trial production - order

Trial production was ordered for evaluation. Select cross-sections of parts whose production volume is relatively large.

6 Evaluation by trial production

Evaluation by trial production. Cracking test for a heat-resistant polyester part. Fitting test.

7 Discussion for trial production

10 Evaluation by trial production

Evaluation by trial production. Cracking test for a heat-resistant polyester part. Fitting test.

11 Discussion for trial production

The heat-resistant polyester material passed the crack test. Delivery method, packaging specifications, and timetable for mass production were confirmed. Because there are a large number of different types of products, and considering the SDGs initiatives, we, following the practice of the competitors, considered replacing the delivery containers of cardboard box with returnable boxes.

12 Check before mass production

Detailed adjustments such as packing specifications.

- OKAYASU ACTION -

2 Internal review

In order to achieve a price closest possible to the current price, low-cost materials shall be selected but without degrading the quality, and material compounds shall be examined. To meet the large production volume required, we shall study other production methods that can help to accelerate the present mass-production study for increasing the capacity of the extruders and extrusion lines.

3 Preparation for trial production

Studied whether it was feasible to increase the speed of the extrusion process, ⇒ Proved feasible Our estimate submitted.

5 Trial production

After manufacturing the nozzle, trial production was carried out. Parts produced by trial production were delivered.

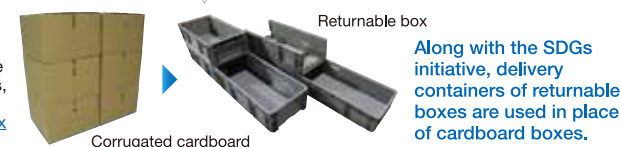
Passed the fitting test. Cracking occurred in a part made of heat-resistant polyester.
(Test condition: 150°C for 240 h)
⇒ Reviewing the material compound "The thermal aging test for EPDM is required to be conducted at 120°C for 72 h. Therefore, the above test condition is likely too severe

8 Internal review

Study for additives available for the heat-resistant polyester material. Discussion meeting between the customer, present supplier and Okayasu.

9 Trial production

Trial production using a new material (compound) was carried out.



Along with the SDGs initiative, delivery containers of returnable boxes are used in place of cardboard boxes.

13 Mass production

At first, 85% of the total demand was produced by Okayasu Rubber Co., Ltd. For 100% production, one extrusion line was added.
Maximum of one year of lead time is required to enter into mass production after we are requested to do so.



Realize wants of "Change"

Designing all aspects including material compounds and production processes for 900 different parts

Success in quick start!

requests to make breakthroughs.

BreakthroughPoint

Okayasu Rubber's production technologies are available for integrating additional processes into the line (extrusion process).
Silicone coating, primer coating and taping within the line (extrusion process).

Case. 6 SEAL RUBBER

<Application> Buffer between headlight and bumper

"Customer need/problems"

- There were no such companies that could do all operations of taping, tab-taping, silicone coating on one side and punching.

- CUSTOMER ACTION -

1 Estimation

We want to do all the processes at a low cost. The specifications are different between the L and R parts. A special process that requires both silicone coating and taping.
*Silicone coating on one side and taping on the other side.
Functional requirements: the silicone coated surface must have a good slipperiness and the surface to be taped must be adhesive.

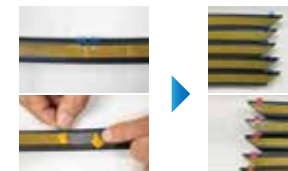
3 Discussion

Trial production was performed completely manually. It was agreed that mass production would be automated except the punching process.



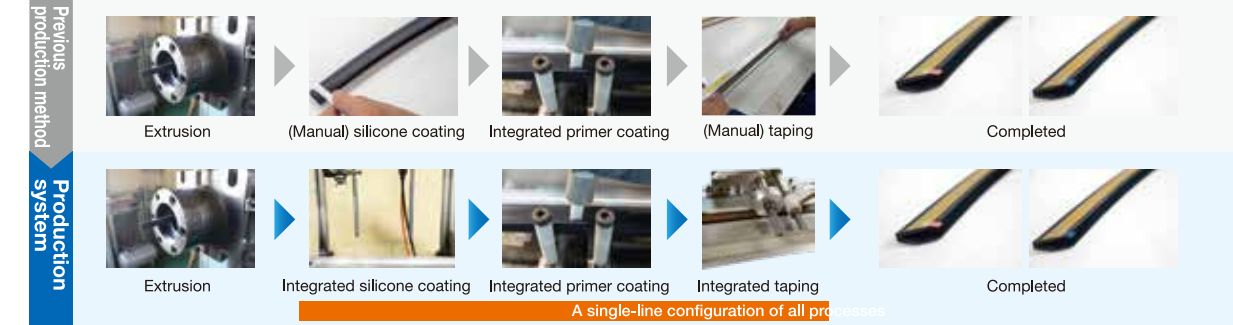
5 Discussion

Purpose of the tab tape: Make the L & R parts distinguishable; and it can be pulled to make it easier to peel off the release paper (improvement of workability).
Previous specifications: The release paper of the tape is cut at the center of the product, and tab tape is applied to the left and right sides of the cut. *Both the customer's and Okayasu's workability is bad.
Proposal for revised specifications: Some tab tape to make it easier to peel off the release paper is applied at one end of the product only. ⇒ Reduction of process time



7 Check before mass production

Detailed adjustments such as packing specifications. Check the quality and workability through trial production.



- OKAYASU ACTION -

2 Internal review

The part required had a form different from the previous ones and it had a portion in which some angles were specified. We had to study whether it was possible to make the part by extrusion. Designing a process in consideration of the final product specifications. We were not sure that it was possible to integrate the taping and silicone coating operations with the main process, so they have to be done manually at first. ⇒ Finally, silicone coating and taping will be integrated into the line. Since the final specifications differ between the L and R parts, examine the option of punching at a later stage.

4 Internal review

A taping jig needed for integrating the process into the line was developed. A sprayer for coating silicone was developed. A simple die was developed.



6 Preproduction preparation

A taping jig needed for integrating the process into the line was developed. A sprayer for coating silicone was developed. Trial production using these devices + monitoring "taping out of place" using cameras. A die available for mass production was developed. Trial production was carried out. Packing specifications were determined.

8 Mass production

Meeting requirements for complex specifications.
Satisfying customer's product specifications taking into consideration the customer's workability.

Realize wants of "Change"

Success in improving complicated production processes

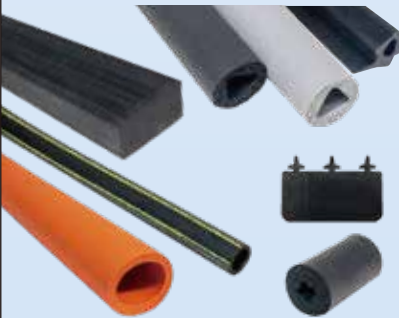
Okayasu supports your life behind the scenes.

As a manufacturer, our company handles products of various materials and shapes.



Vehicle related

- Car protector
- Insulator rubber
- Water packing for car air conditioner
- Seat for cabin air pressure regulating valve
- Rubber for bonnet cushion
- Buffer material for weather strip
- Grommet for car wiring
- Cushion for fuel tank
- Cable protector



Components for light electrical appliances

- Vibration-damping rubber for air compressor
- Rubber bush for air compressor
- Silicone spacer
- Airtight packing for blackboard eraser
- Vibration-damping sponge rubber
- Pipe fastener for outdoor unit
- Drain air backflow preventer
- Air conditioner drain hose



Infrastructure, building, and industrial use electric power related

- Seat ring for butterfly valve
- Sound insulation outlet cover
- Water cover for balcony
- Water packing for traffic signal
- Tactile blocks for visually impaired people
- Door rubber packing
- Doorstop rubber
- Shutter sponge
- Light-shielding packing
- Rubber for jointing between floor tiles
- Waterproof gap-filling plate for building material



Housing equipment related

- Rubber plug for bathtub
- Rubber nut for toilet
- Light shielding packing for lighting fixture
- Step offsetting mat
- Highly foamed cushion for toilet base
- Perforated rubber lid for sink
- Cord bushing for water faucet
- Floor mat for bathroom
- Waterproof packing for switchboard



Food, medical and nursing care related

- Packing for medical pail
- Slope board for wheelchair
- Rubber hose for cryotherapy
- Slip-preventive rubber for handrail to help people stand
- Medical wrist band



Miscellaneous

- Umbrella stop
- Rubber bat for practicing swinging
- Jump rope grip
- Grip for lawn mower



OKAYASU Brand (Okayasu Rubber Standard Products)

Utilizing our own technological capabilities, we have developed unique, standardized products. Our products are available also on the Internet shops. (Excluding elastomer)



"Tough Long" series

- "Tough Long" ES5
- "Tough Long" sheet
- "Tough Long" microcell



Fukuraku series

- Kitchen floor mat
- Toilet floor mat
- Washstand floor mat
- Fatigue-reducing floor mat



Round cord series

- Rubber seal (round cord, solid)
- Tough Seal (round cord, sponge)

Standard products

Elastomer



Small parts produced by extrusion

- Sponge pipe
- Sponge square cord
- Sponge semicylindrical cord
- U-shape grooved rubber



Mamoru-kun series

- Orange-brown 5M
- Orange-brown 10M



Rubber plates

- Rubber plate (solid)
- Sponge rubber sheet (sponge)



Elastomer series

- General purpose series
- Vibration-dampening series
- High specific gravity series



Integrated system from design to production. Taking advantage of our capabilities of designing production processes, we shall continue creating integrated, one-stop production systems.

Our one-stop production systems consisting of our own designed general-purpose machines will lead to higher efficiency in production.

We are actively investing in developing processing machines and robots.

Production Process



Corporate Profile

Company name	Okayasu Rubber Co., Ltd.
Start operation	April 9, 1936
Founding	April 9, 1947
Capital	30 million yen
President & CEO	Soichiro Oka
Number of employees	202 (group total), 97 (Okayasu Rubber only)
Head office	271-1 Yamadera-cho, Kusatsu-shi, Shiga 525-0042 Japan
Phone number	077-562-7271 (switchboard number)
Domestic sales offices	Shiga, Osaka, Saitama and Aichi
Domestic plants	Shiga (site area: 15,626 m ² ; total floor area of buildings: 6,453 m ²)
Overseas plants	Malaysia
Overseas branches	United States of America



Our social media accounts:



You can view various pieces of content such as "Learning About Rubber/Factory Tour" and "Product Lineup." Through these easy-to-understand videos, you can see how the products are produced in the factory.

For details, click here ▼



Environment and CSR

ISO certificate acquisition status

■ Head office plant	ISO 14001:2015 acquired on February 27, 2001 ISO 9001:2015 acquired on March 28, 1997	■ Malaysia Plant	ISO 9001:2015 acquired in March 2005 ISO 14001:2015 acquired in March 2004
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Business Bases

Head Office Plant

271-1 Yamadera-cho, Kusatsu-shi,
Shiga, 525-0042 Japan
TEL: 077-562-7271

E-mail: okayasu.pm@okayasu-rubber.co.jp
Consistent operations for designing compounds of rubber materials, designing and manufacturing molds and dies, processing, and quality assurance.



Nagoya Office

4th Floor, Nagoya Itochu Building,
1-5-11 Nishiki, Naka-ku,
Nagoya-shi, Aichi, 460-0003 Japan
TEL: 080-8943-1599



OKAYASU RUBBER (MALAYSIA) SDN.BHD.

Selangor, Malaysia

Lot 3846, Jalan 4-D,
Kampung Baru Subang,
Seksyen U6, 40150, Shah Alam,
Selangor Darul Ehsan, Malaysia
TEL: 603-6157-2001
E-mail: malaysia@okayasu-rubber.co.jp
Web: <https://www.okayasu-rubber-malaysia.com/>
We can meet the needs of customers using the same quality assurance systems and facilities as those in Japan, but at lower cost.



Osaka Office

9-13, Higashiobashi 3-chome,
Higashinari-ku, Osaka,
537-0024 Japan

For telephone inquiries, please contact
the head office.



Omiya Office

Mio Omiya, 9-18, Sakuragi-cho
1-chome, Omiya-ku, Saitama,
330-0854 Japan

For telephone inquiries, please contact
the head office.



Okayasu Rubber America, Inc.

Texas, USA

12762 O'Connor Road, San Antonio,
Texas 78233 USA
TEL: +1-210-880-1310
E-mail: keijiro.oka@okayasu-rubber.com

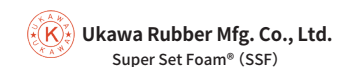


Joint venture company profile

Trade name/logo	 Okayasu Rubber Co., Ltd. × Ukawa Rubber Mfg. Co., Ltd. Synergy Works Inc.
Business location	Sales Headquarters/290 Ozone, Yashio City, Saitama Prefecture (inside Ukawa Rubber Mfg. Co., Ltd.) TEL: 048-995-7481 Delivery Center: 271-1 Yamadera-cho, Kusatsu City, Shiga Prefecture (inside Okayasu Rubber Co., Ltd.) TEL: 077-562-7271
Business details	Sales of products jointly developed by Okayasu Rubber and Ukawa Rubber Manufacturing

■ Background and purpose of establishing the new company

As companies in the same industry, Okayasu Rubber and Ukawa Rubber Manufacturing believe that they should aim to grow together by utilizing their respective characteristics in order to adapt to change, and have been discussing the possibility of collaborating, transcending the barrier of the confidentiality of know-how. As part of this effort, we have developed the highly restorative rubber sponge long sheet "Tough-long SSF-Sheet™". With this completion, a new company has been established for the purpose of selling the functional materials of both companies. The new company aims to provide optimal solutions to customers by combining manufacturing know-how, industrial knowledge and sales power, improving its presence in the market and addressing a wide range of needs.



[Tough-long SSF-Sheet™]