

You thought you knew but didn't
Sumitomo Riko's Business
Episode 10: Components for office
automation equipment

Fuji-Susono Plant premises

Wow,
amazing!

I can see Mount
Fuji from the plant
premises!

Ohhhh!

So you made it
then, Ms. Tomoi

Hmph
You're here at last

Ms. Tomoi,
welcome

This is Ms. Smith,
and I'm
Mr. Kawamura

It's nice to
meet you!

Engineering Section
Ms. Smith

Engineering Section
Mr. Kawamura

O... oh... Thank you
very much!

It's OK,
I understand
Japanese!

I was
speaking
Japanese
just now,
wasn't I?

Well, I heard this plant
makes rollers and blades
for photocopiers and
multifunction printers

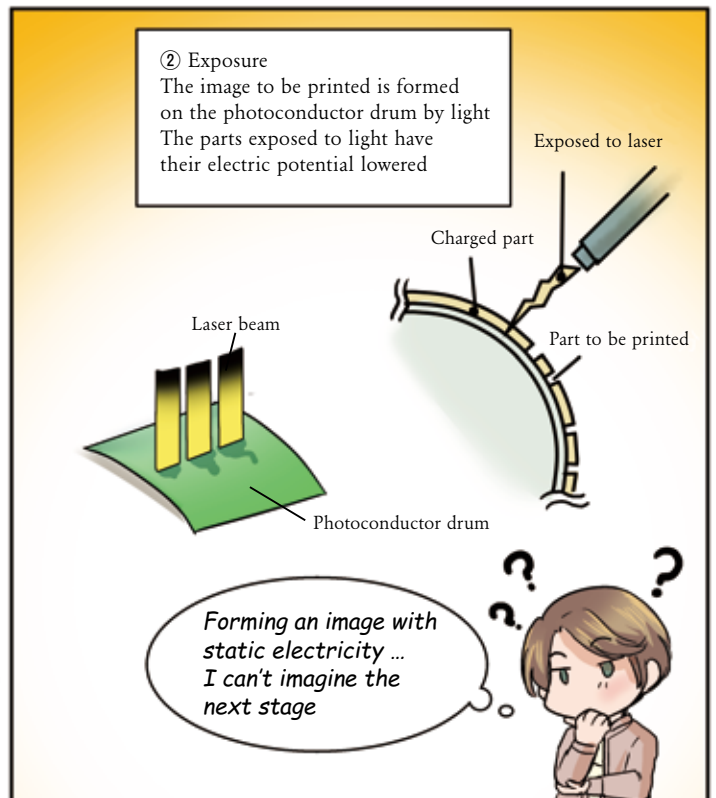
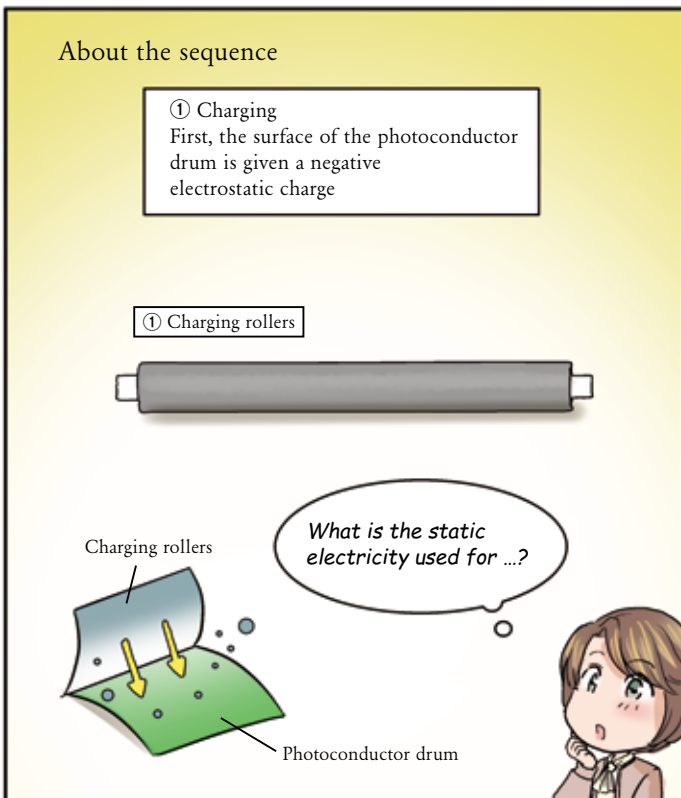
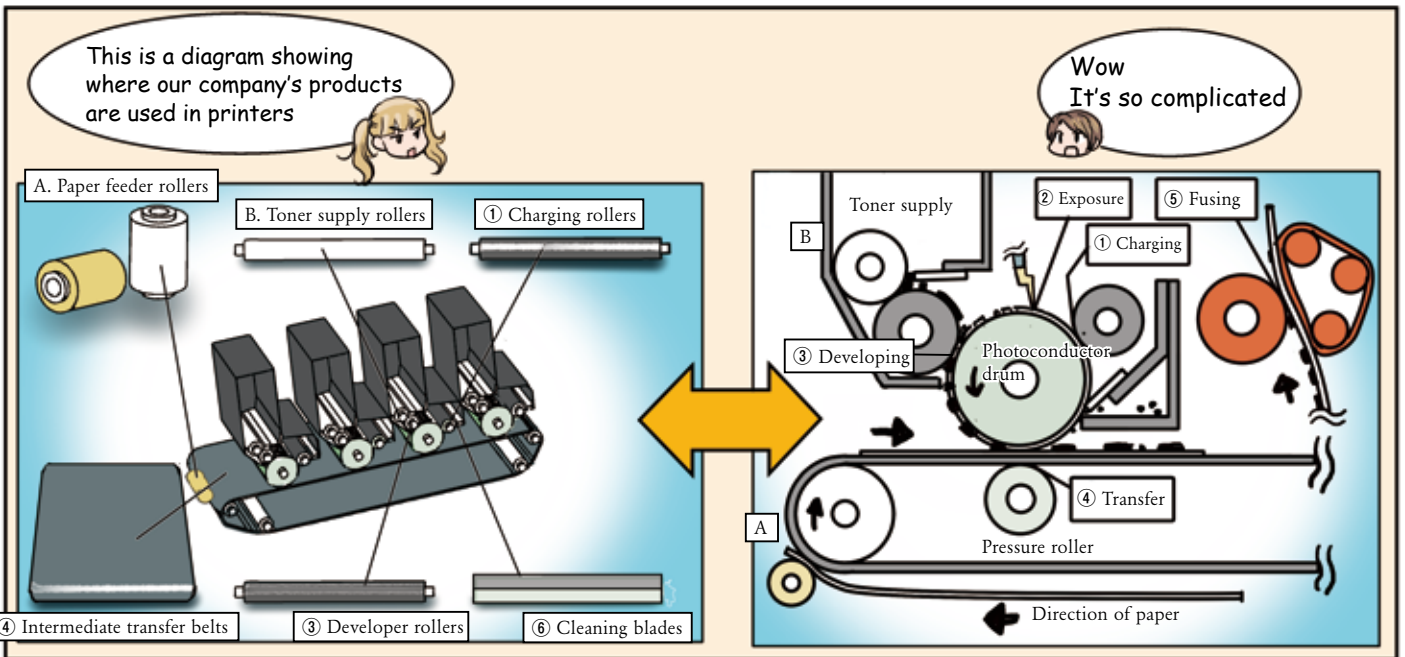
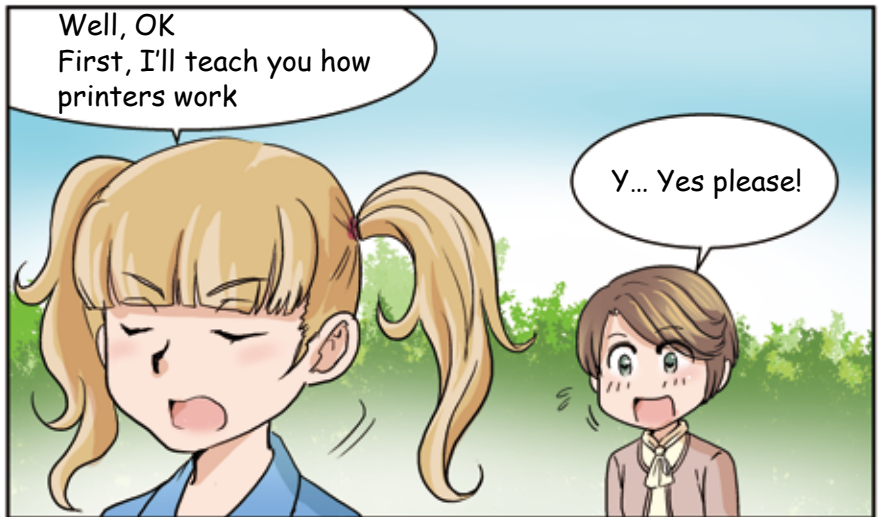
I imagine they are
simply made in a round
shape, but ...

What are you
on about ...

No!!!

Huh?

Startled



③ Developing

Toner powder only sticks to the parts of the photoconductor drum with a lower electric potential

③ Developer rollers



I kind of understand ...

Like the way small pieces of Styrofoam are repelled on a plastic sheet

Developer rollers

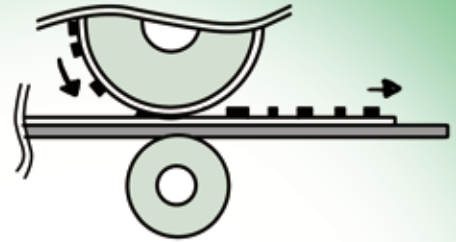
Toner

Photoconductor drum

You can think of it like that

④ Transfer

The transfer roller presses the paper against the photoconductor drum as a positive charge is applied beneath the paper, causing the toner to move to the paper



Photoconductor drum

Printing paper

It moves to the paper ...
So we have such technology

⑤ Fusing

Finally, heat and pressure are applied to fuse the toner that has been transferred to the paper.



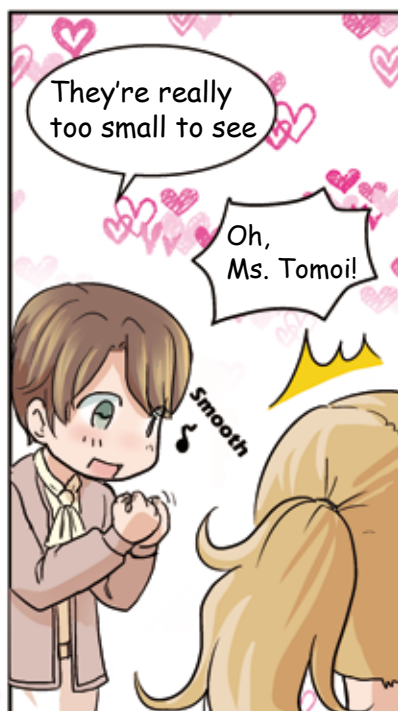
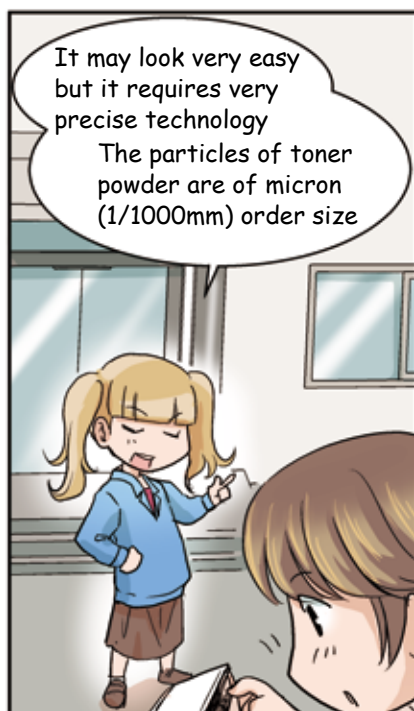
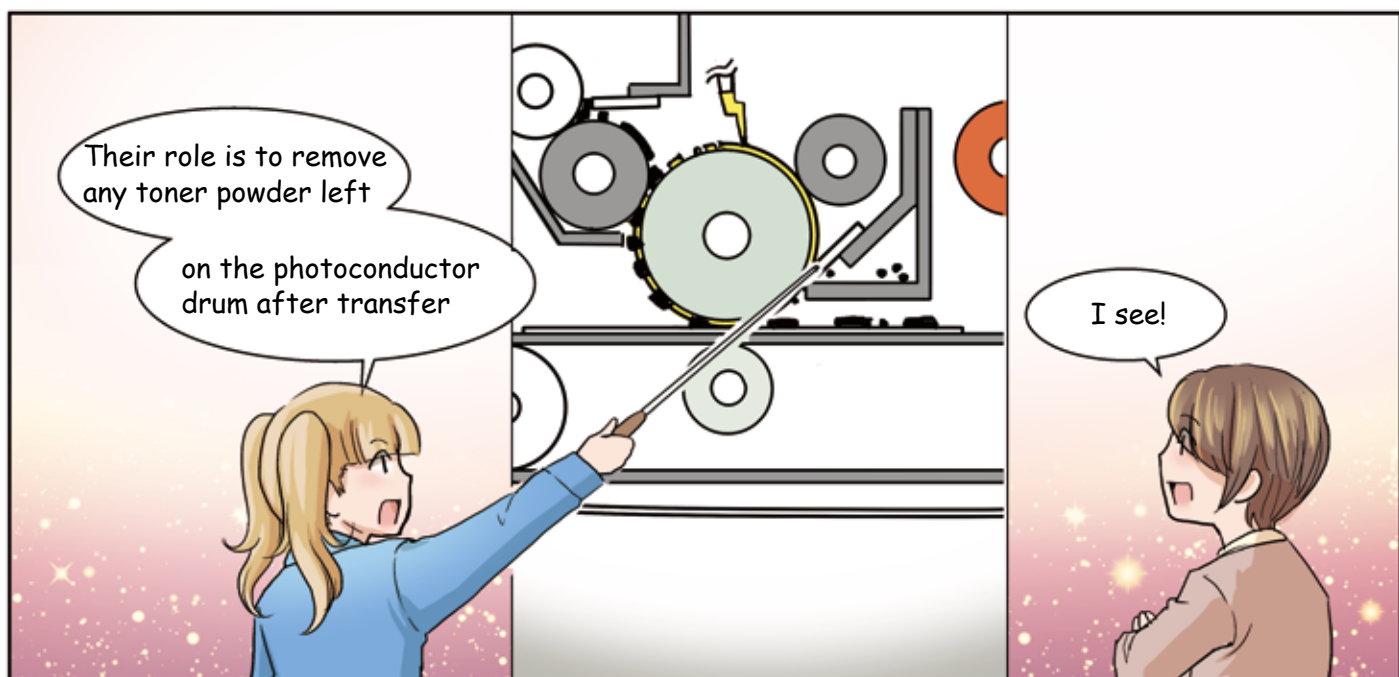
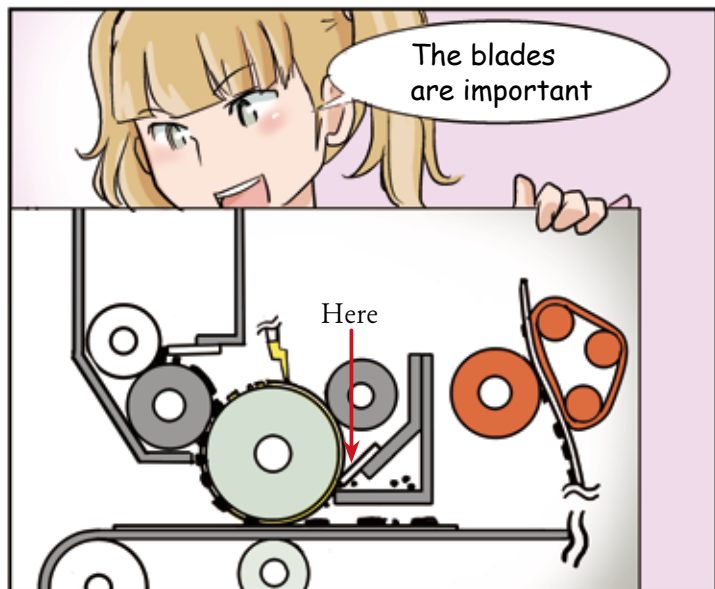
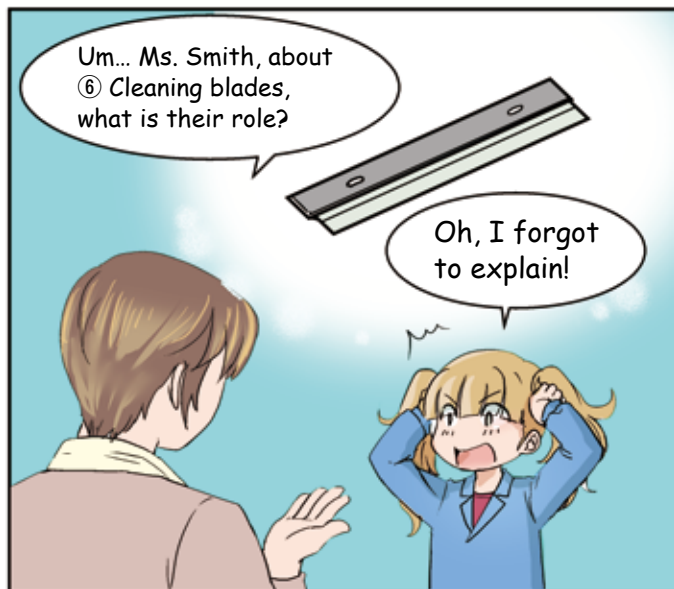
So that's the process.

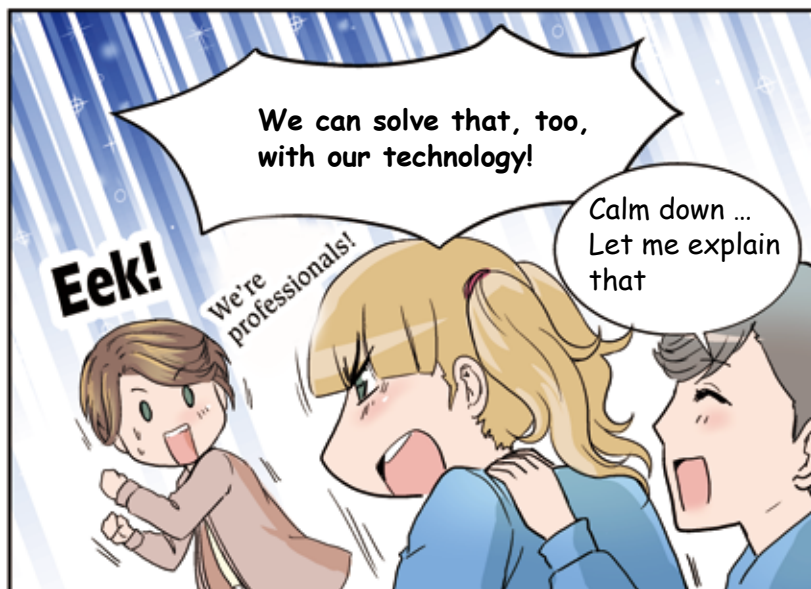
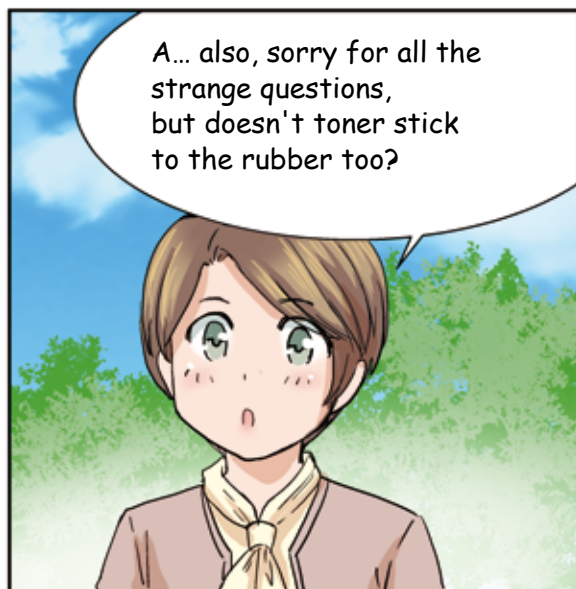
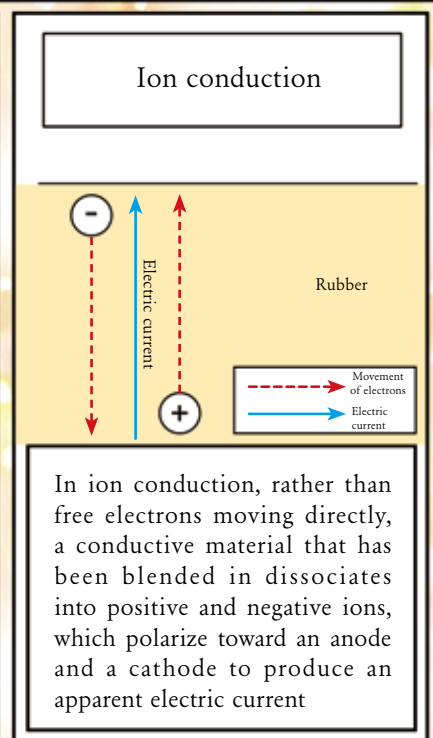
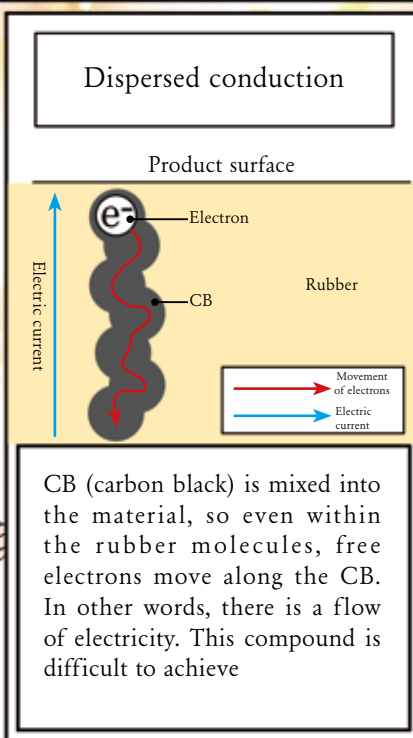
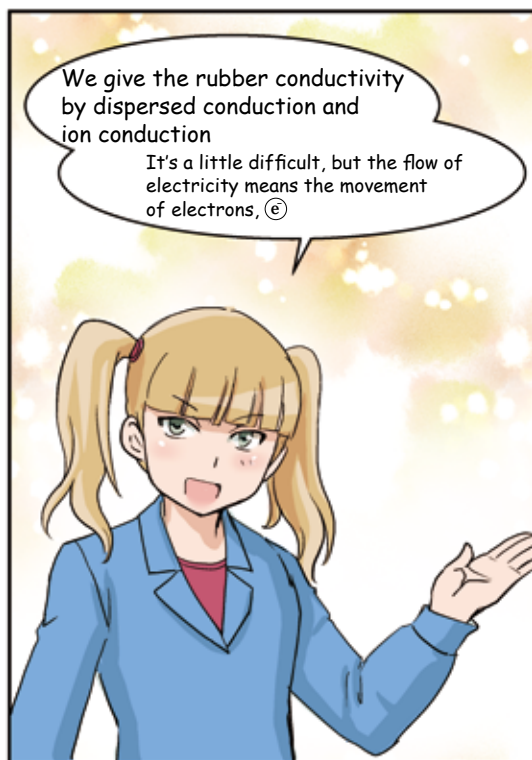
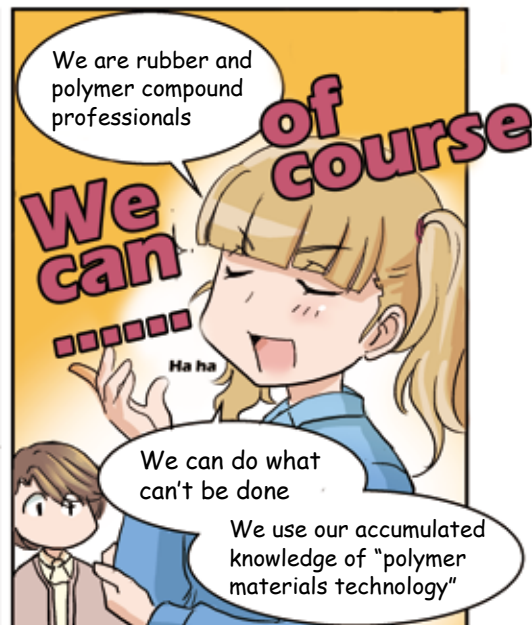
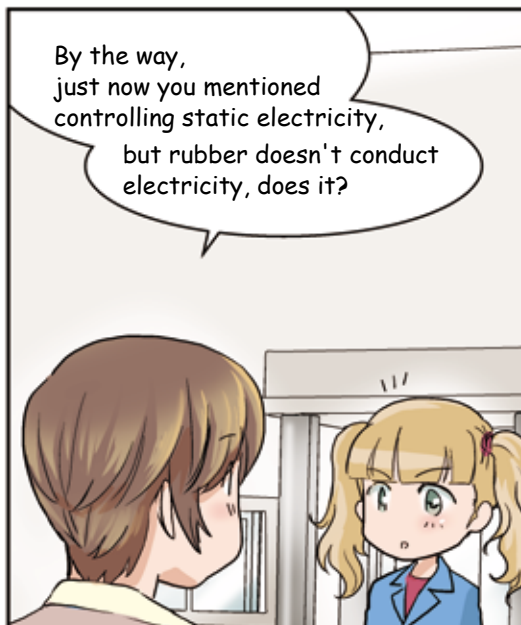
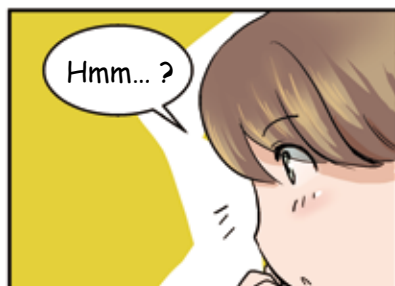
Amazing!

Suddenly!

I didn't know printers had such a complicated function!

Well, yes, they do





Just as you said, if any toner stuck to the rubber, printing would be spoiled

Physical control

Application of particles

Bumps (small)

Bumps (small & large)

Mold transfer

Bumps

Indentations

Anti-electrostatic process

Ohhh

So we control the rubber's tackiness, that is, adhesion, by making its surface uneven and giving it a chemical component that is difficult for the toner to stick to

Sorry
They are extremely high precision products, aren't they?

Yes, they are

Toner particles are extremely small, so our company's products that deal with them are high-precision and high-performance

Roundness: $5\ \mu\text{m}$ >
Variation: $30\ \mu\text{m}$ >

*Deviation when rotating around a central axis
(Rubber hardness 30° θ 12-230L)

We make those high-precision products here at Fuji-Susono Plant

Oh, by the way, uniforms at this plant are dust-resistant so that dust etc. does not get mixed in

We make the surface of our products uniform not by grinding but a manufacturing method called thin film application, in order to prevent printing errors

