



Low Temperature Drying Equipment



KENKI Corporation

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KENKI Corporation

Moriyama Factory Founded in 1964.

Moriyama Co. Ltd. Established in 1972.

KENKI Industry Co. Ltd. Established in 1973.

Changed its name to KENKI Corporation in 1994.



DEVELOP and DESIGNE

KENKI Corporation

CEO: Hideyuki Moriyama

Equity Capital: 10 million yen

**Kami-muta 3-9-7, Hakata ward,
Fukuoka city**

Employees: 4



MANUFACTURER

Moriyama Co. Ltd.

CEO: Hideyuki Moriyama

Equity Capital: 10 million yen

**Kami-muta 3-6-19, Hakata ward,
Fukuoka city**

Employees: 5



Our Businesses

Productive facility

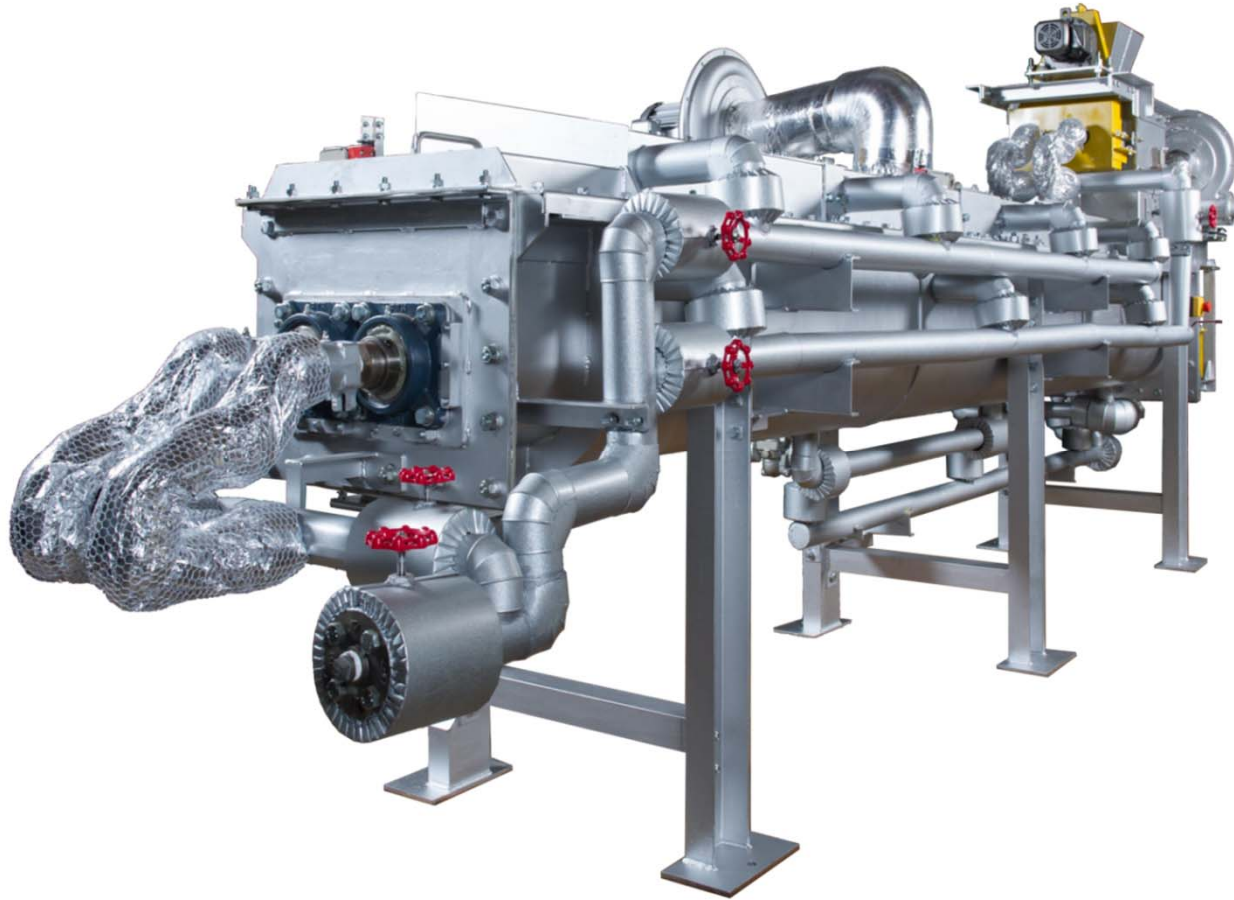


Drying equipment, Conveyor, Air-conditioning, Transmission, water treatment equipment

Integrated manufacture

Development, Design, Manufacturing, Constructing and Maintenance

Low Temperature Drying Equipment



Our drying equipment is designed for industrial slurry and sludge

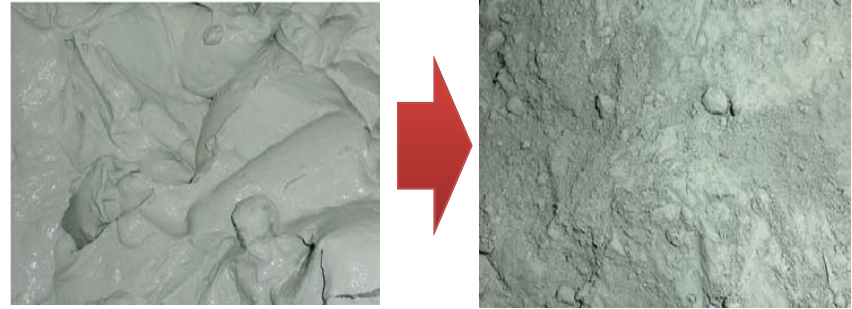
Target material

Adhesive



Silicate Calcium

Sticky



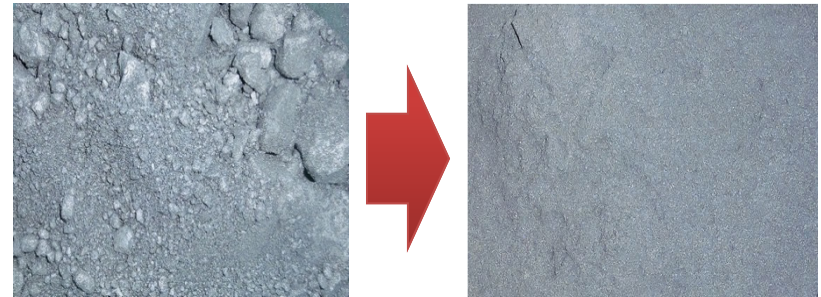
Indium

Solid



Pigment

Powder



Aluminum

Drying for the adhesive and viscous materials

Target material



Polycarbonate



CaO



Chemical sludge



Wood tip



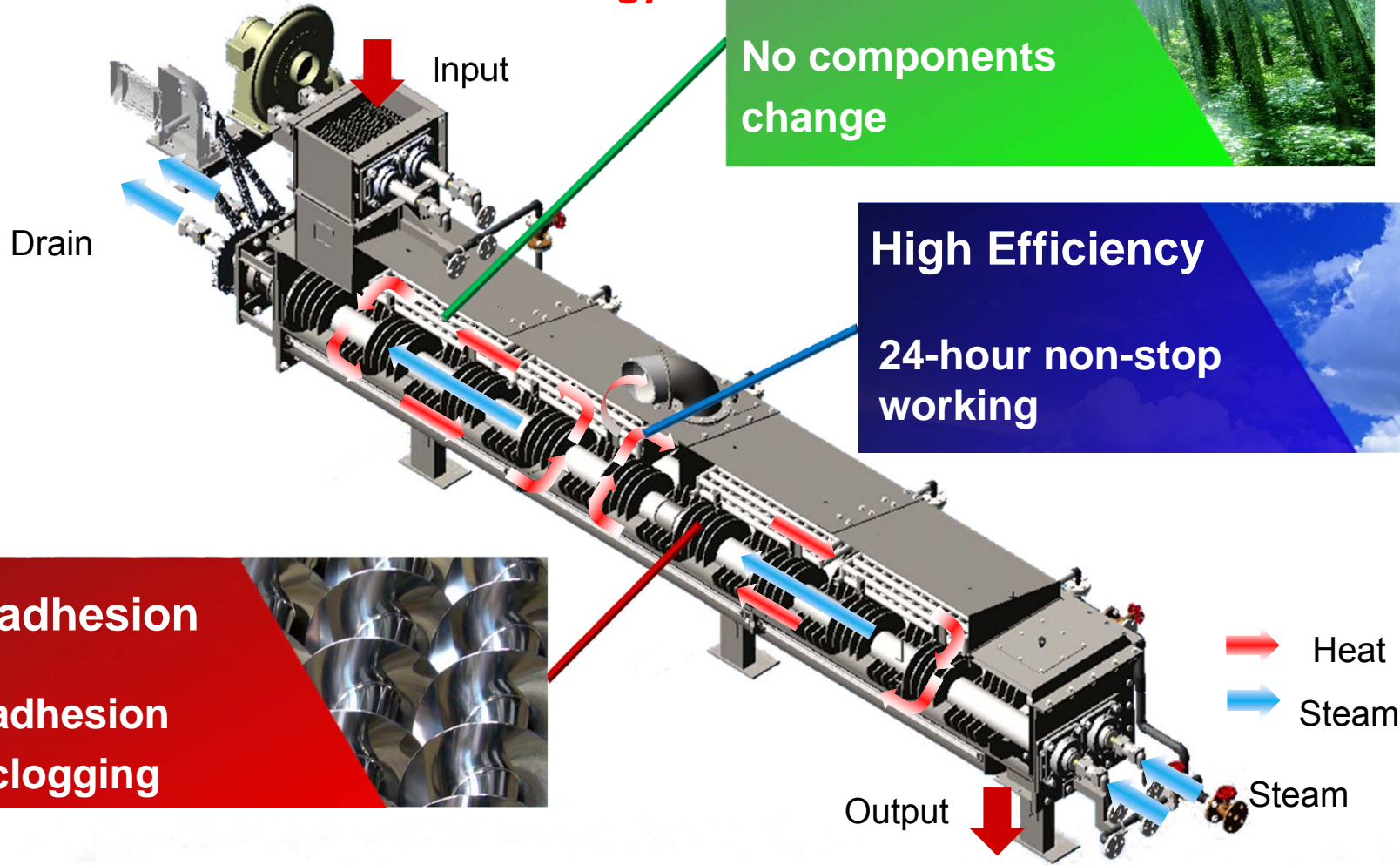
Food sludge(Fish)



Food waste (Okara)

SHTS Structure

SHTS:
Steam Heated Twin Screw Technology



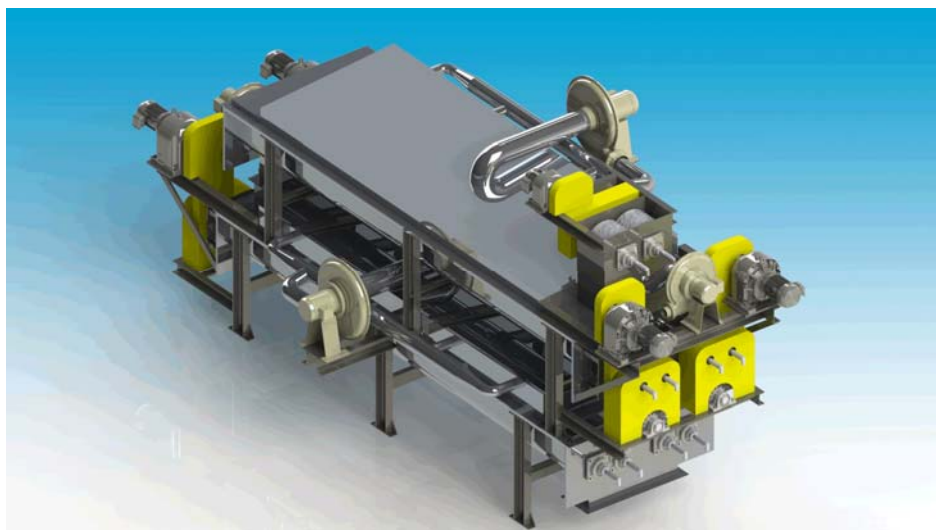
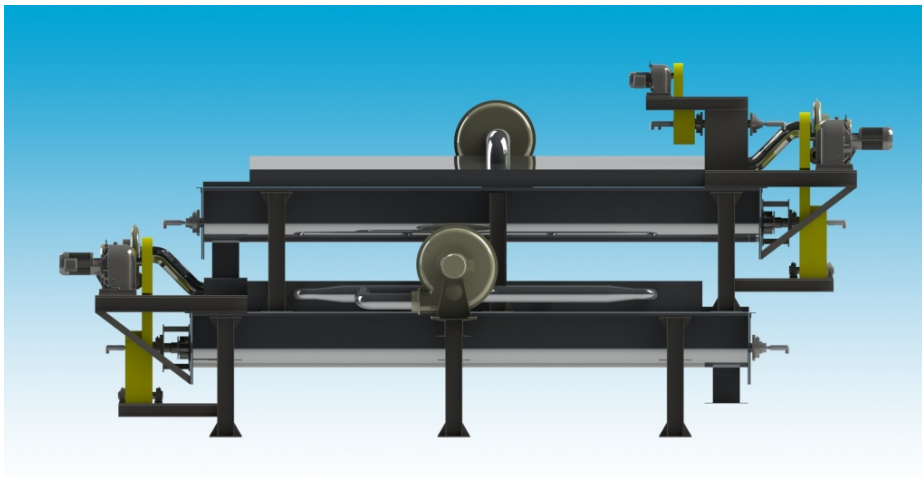
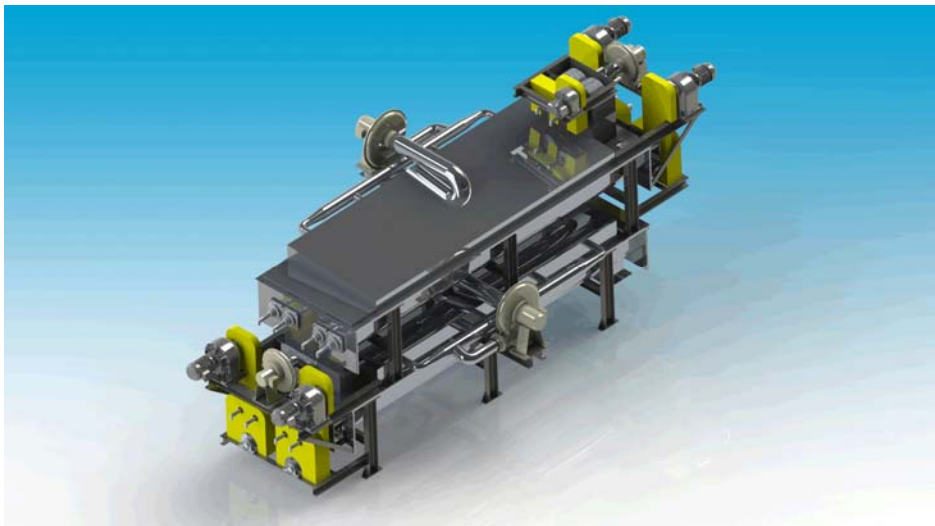
Low Temperature
No components change

High Efficiency
24-hour non-stop working

No adhesion
No adhesion
No clogging

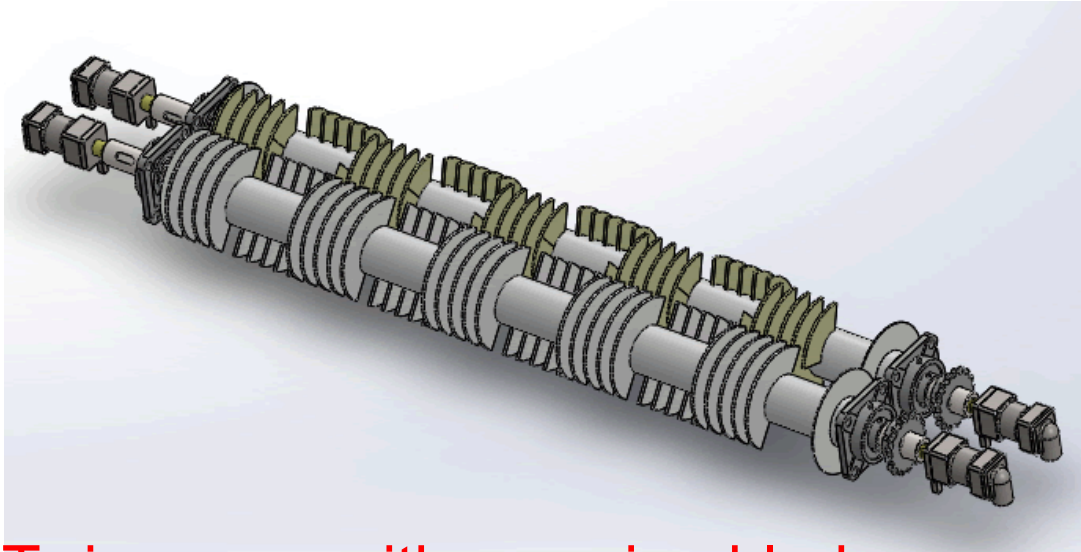
Low temperature drying equipment using steam from your plant

SHTS Structure



Drying capability can be adjusted from 50kg~400kg by combining the main units

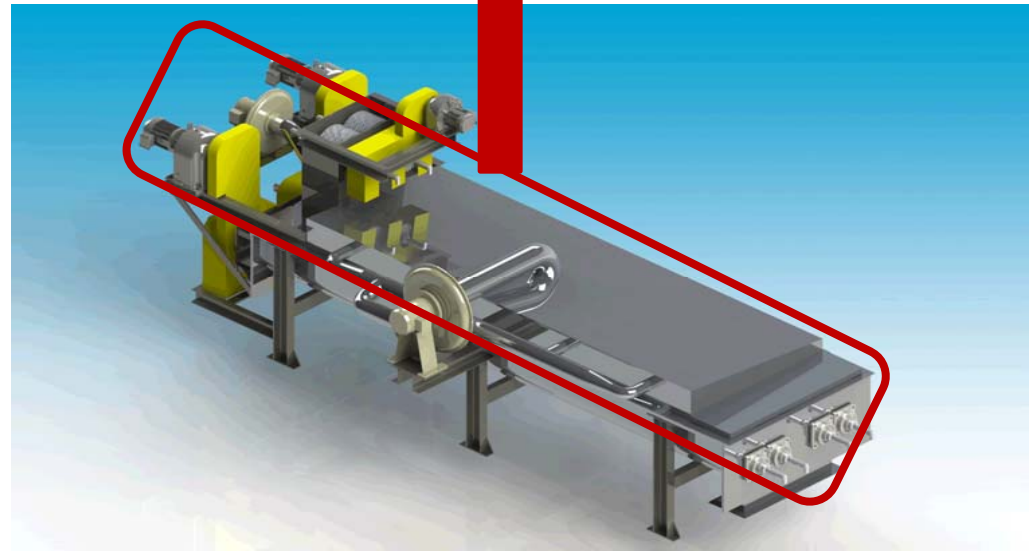
Mechanism of anti-adhesion



Twin screw with scraping blade

SHTS* was patented in
Japan, France and U.S.

(*) Steam Heated Twin Screw Technology



Demonstration

Mechanism of anti-adhesion

Operating

Our Service



Drying test

Example:
Paper sludge



Input



water content 86%

Output



water content 1%~30%*


(*)The drying capacity depends on the type of material and material water content.

Drying test


平成25年5月29日
研機株式会社

脱水汚泥乾燥テスト写真


乾燥テスト機外観




投入原料




投入原料




排出中



乾燥後



乾燥後



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Test report

平成25年5月28日 実施

客先名 [Redacted]

原料名	脱水汚泥	本体回転数	右	6 RPM
羽根種類	SHTS		左	2.8 RPM
投入量/時間	10kg/時間	周波数	12 HZ	
投入量/分	1.67kg/10分	蒸気圧力	0.7 Mpa	
		蒸気温度	170 °C	

(定格: 6.3A)

時刻	重量 (kg)		温度 (°C)						ドレン重量 (kg)			水分率 電流値		
	投入	排出	室温	原料	乾燥後	機体排出部	機体投入部	循環ダクト	排出ダクト	軸	循環	本体	%	A
10:30			Dry23	26.9		124.6	89.7	110.5	97.0				64.1	1.6
			Wet23											
11:00	5	1.6	Dry23	25.6	41.5	124.5	90.0	109.3	96.0	7.48	1.11	1.53	49.4	1.6
			Wet23											
11:30	5	3.3	Dry23	25.6	50.9	122.6	100.8	104.1	94.1	6.65	0.92	1.38	41.6	1.8
			Wet23											
12:00	5	2.0	Dry23	26.1	48.7	121.4	101.0	104.7	92.0	6.77	0.89	1.54	46.6	1.6
			Wet23											
12:30	5	1.7	Dry23	25.7	50.5	123.2	105.3	102.2	92.3	6.15	0.88	1.44	38.0	1.5
			Wet23											
13:00	5	1.7	Dry24	26.5	52.0	122.9	103.8	104.8	90.0	6.31	0.87	1.44	46.4	1.5
			Wet23											
13:30	5	1.6	Dry24	25.8	50.4	122.6	95.5	102.6	87.7	5.67	0.84	1.20		1.5
			Wet24											
14:00	5	1.8	Dry24	25.8	47.8	121.1	90.3	99.1	92.3	5.57	1.02	1.46		1.5
			Wet24											
14:30	5	1.8	Dry24	25.8	44.0	122.1	95.8	103.9	92.4	5.90	0.99	1.49		1.5
			Wet24											
	40									50.50	6.39	4.35		

研機株式会社

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Contract service (drying service)

Need help with drying?

- At the experimental stage.
- The processing amount is small.
- No need to introduce drying equipment.



Provide drying service

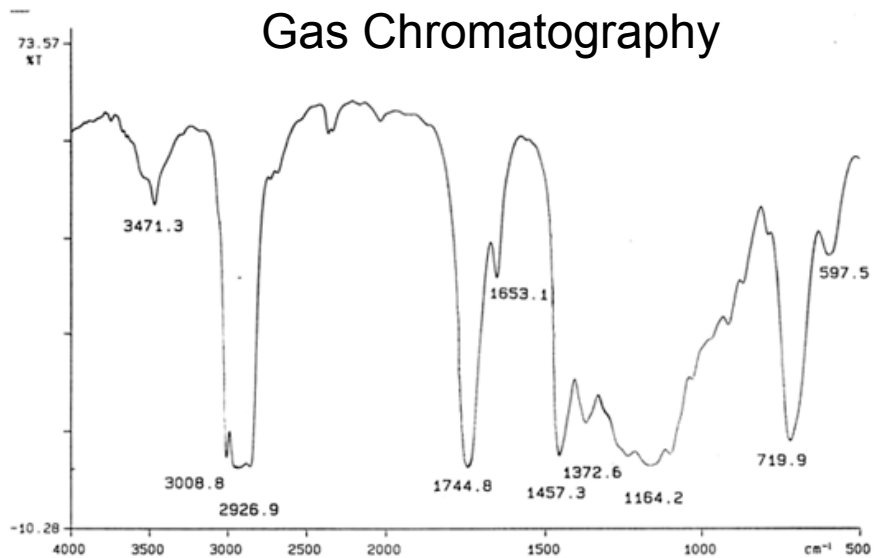
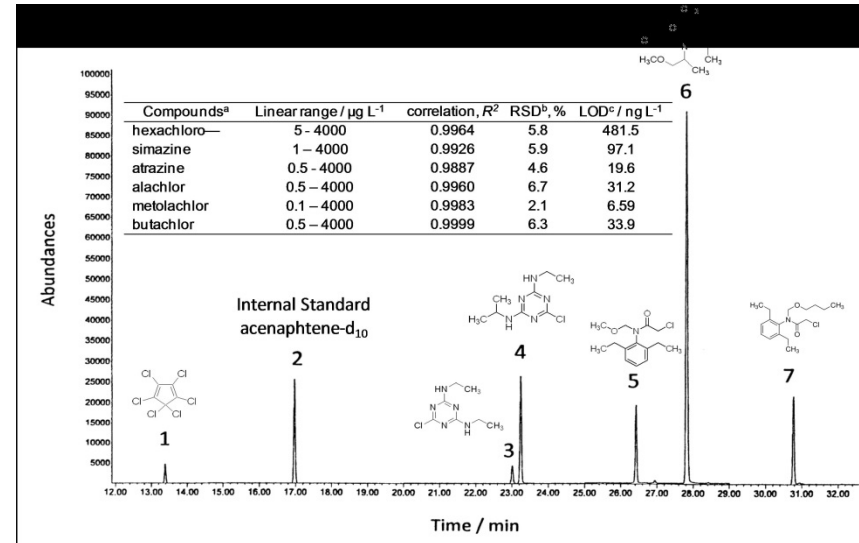
- Use our drying equipment
- Please provide the material to us.
- All the work will be done by us.
- Ship dried material in the water content to meet your order.
- **The dry material will be delivered to you with a drying report.**



Material Analysis

Analyze your material component

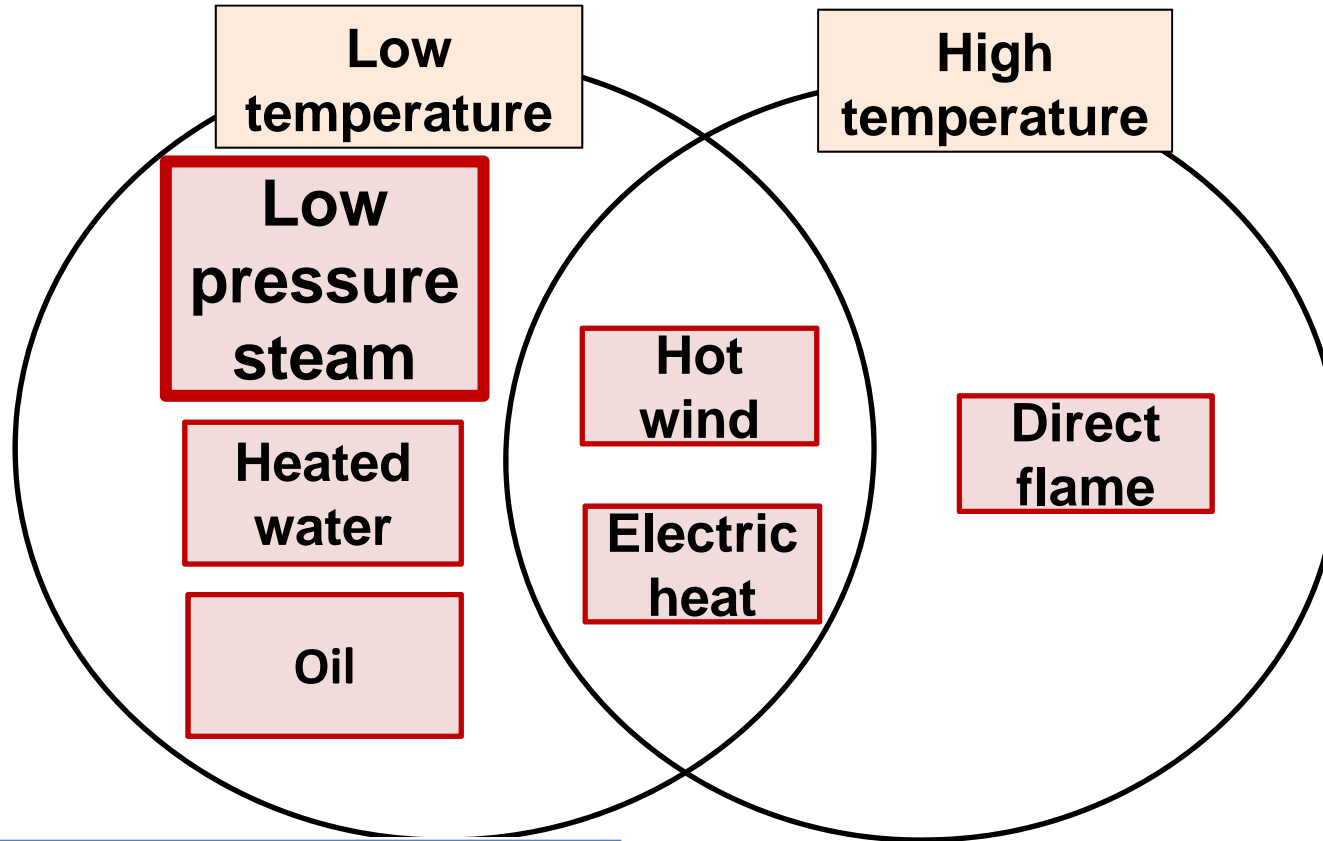
(In preparation)



FTIR

Appendix

Steam Recycle System



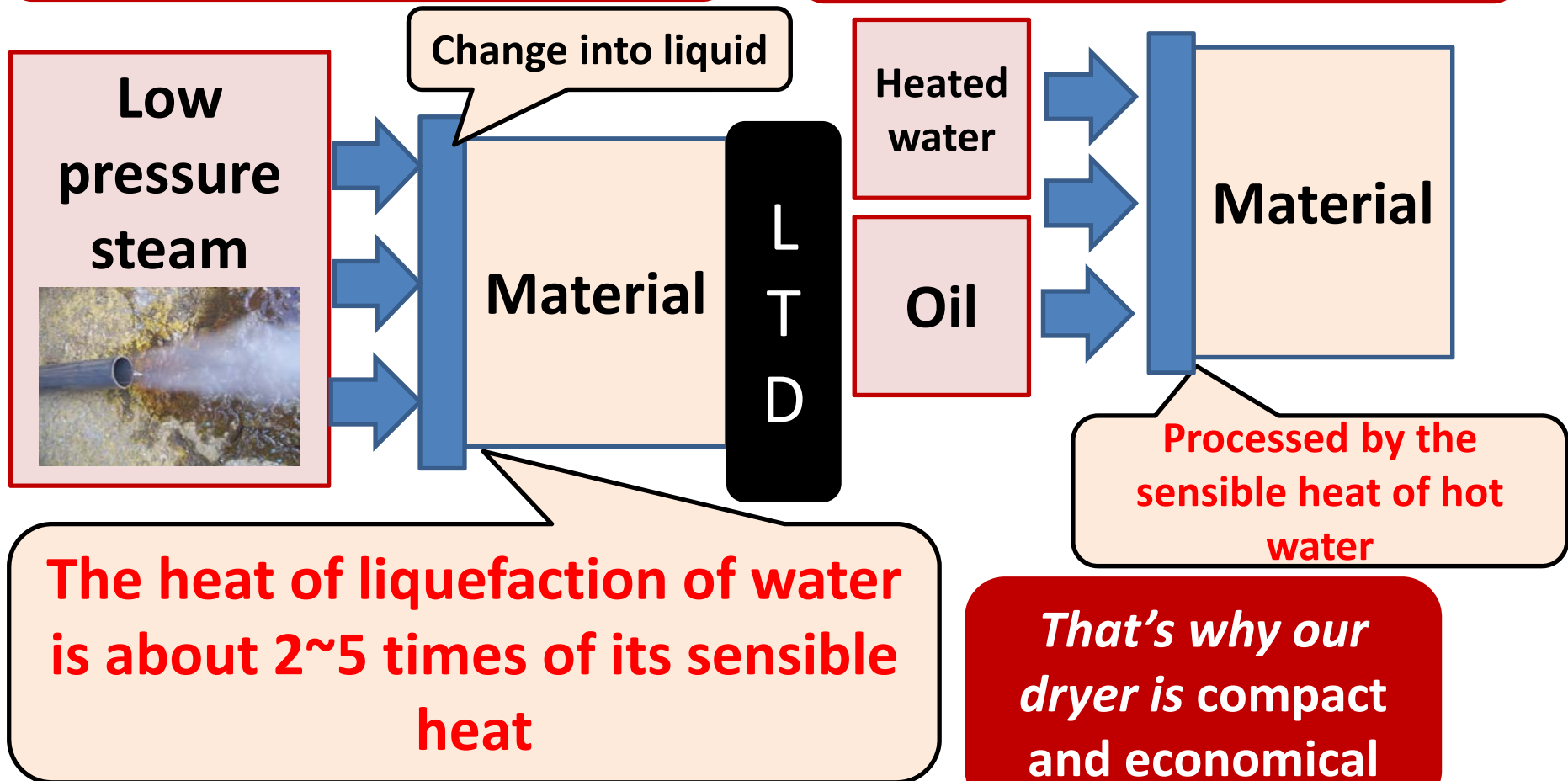
SHTS Dryer		
Steam pressure (Mpa)	Steam temperature (°C)	Inner temperature (°C)
0.5	158	About 100~130
0.05	100	About 70~85

Processing temperature can be regulated by steam pressure

Steam Recycle System

Heat transfer in condensation

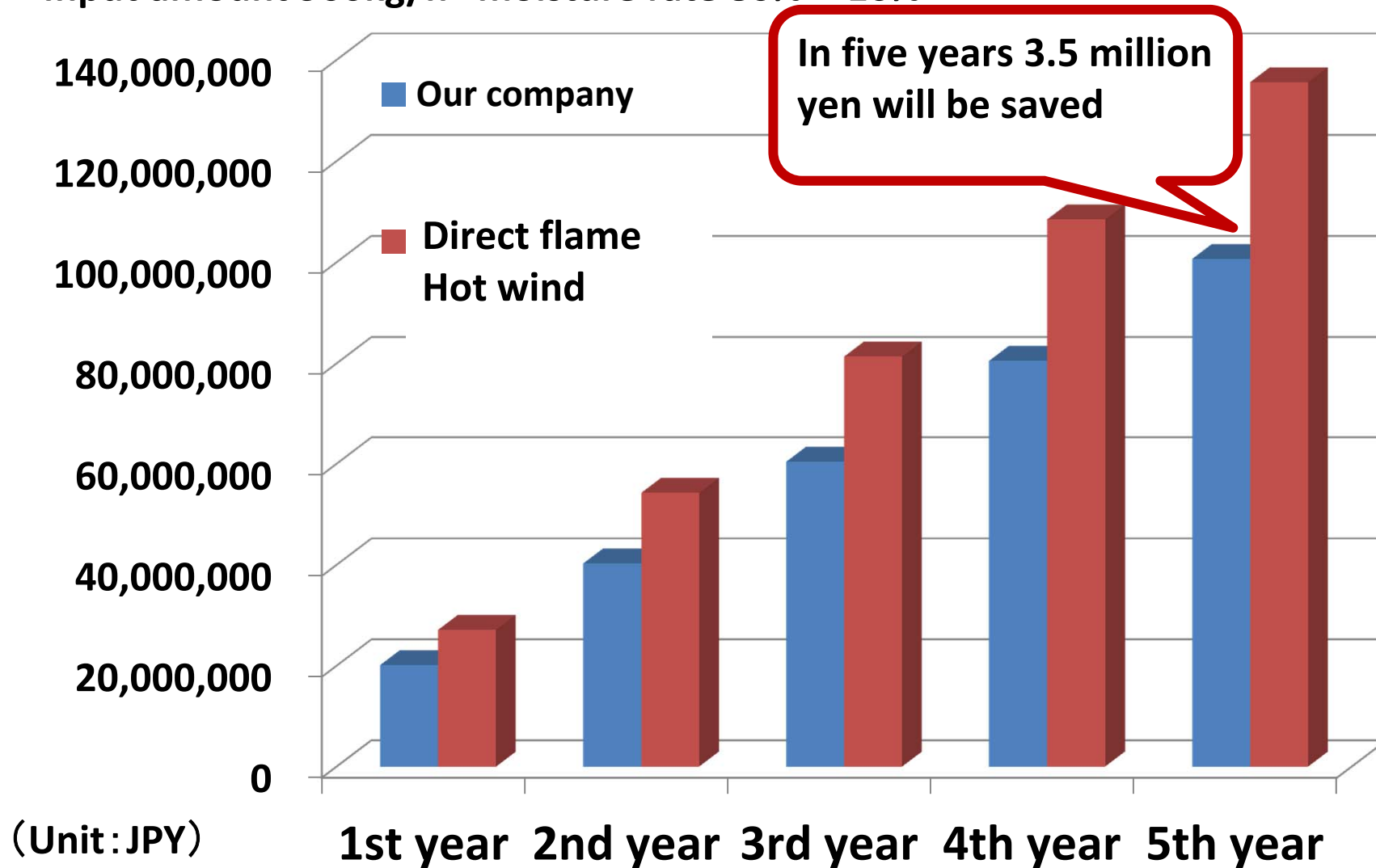
Convective heat transfer



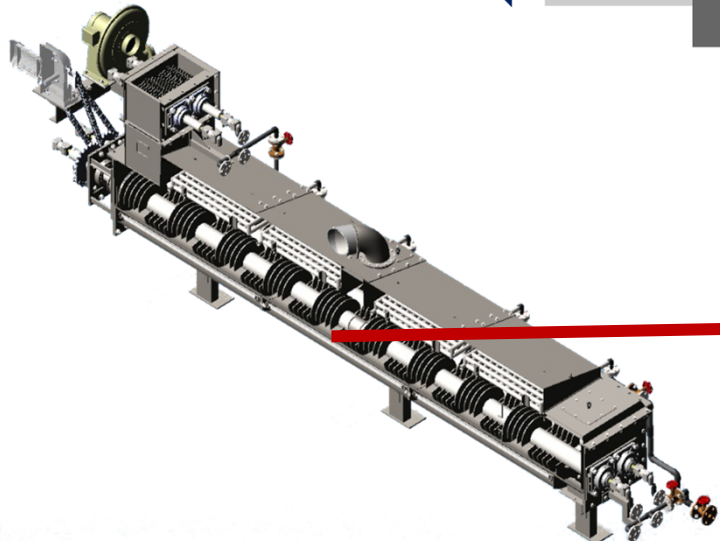
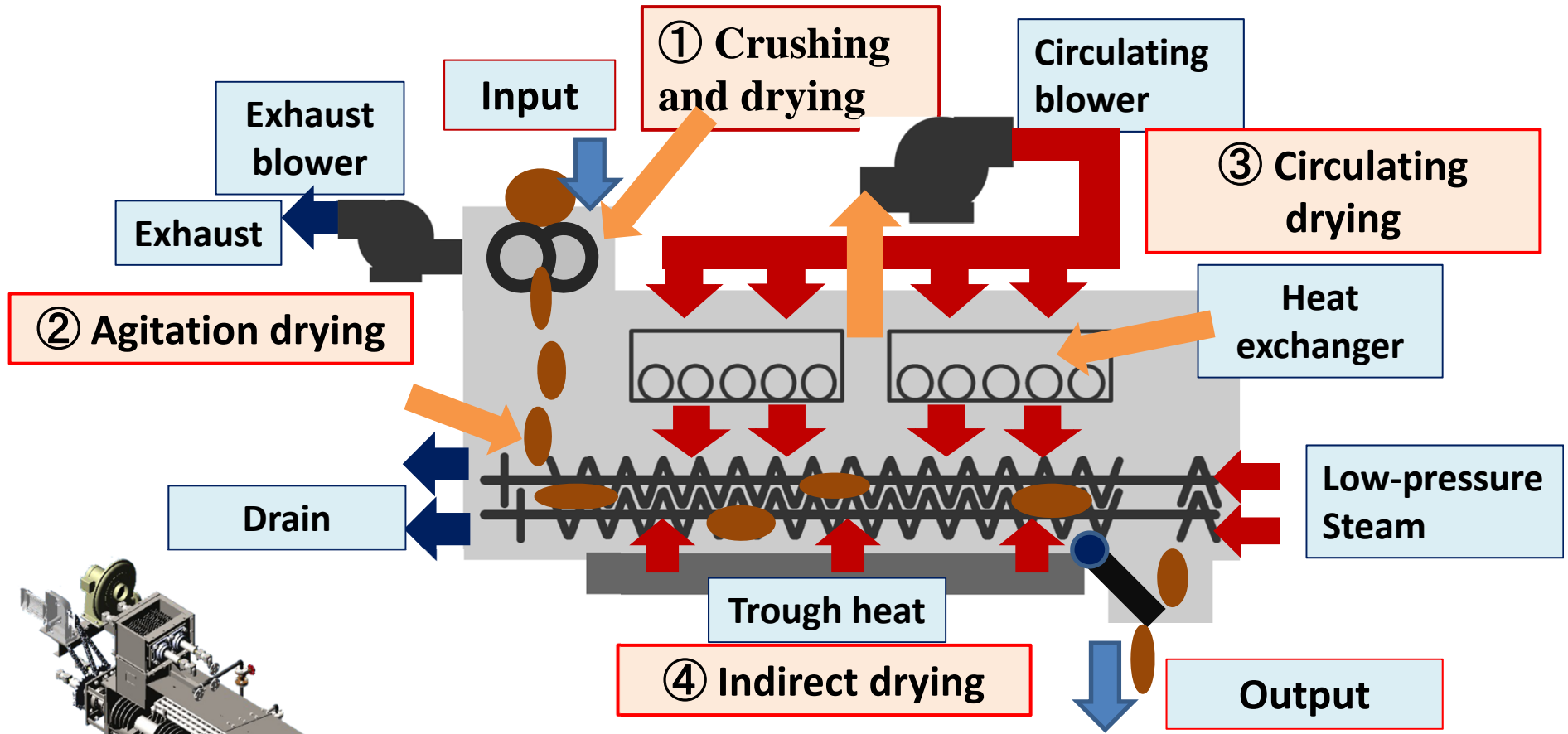
Running Cost

A sludge drying case in a marine product plant

Input amount 900kg/h moisture rate 80%⇒10%

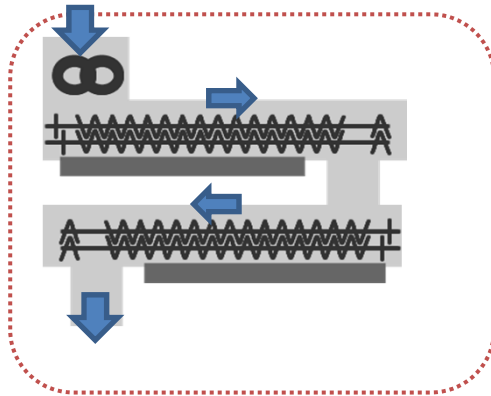


Four methods of drying process

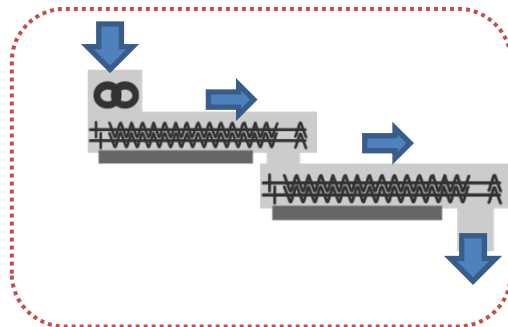
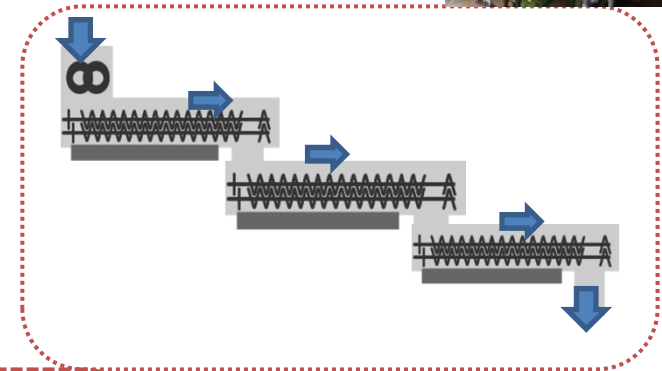


By controlling the rotation speed, the regulation of output moisture rate is possible

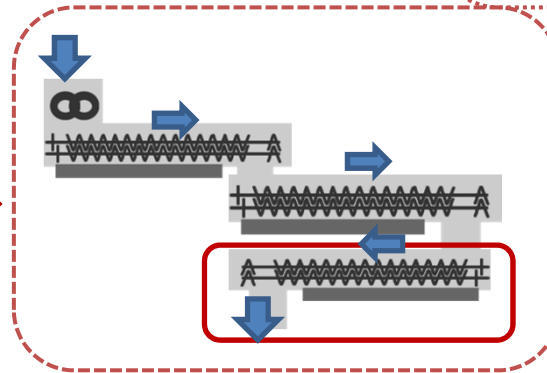
Distributed processing mechanism



Flexible to
your needs



Add



- Economic burden is low for per set
- **Stable operation**
- Can be adjusted to meet requirements
- **24 hours nonstop working**

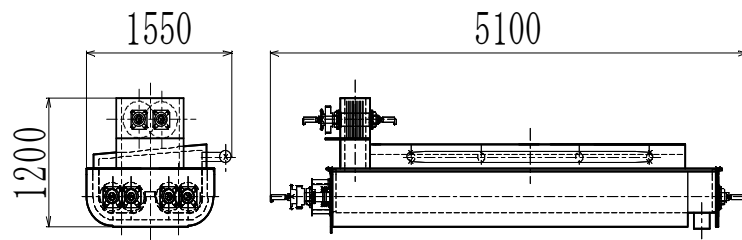
**No halt in
distributed
processing**

KS series dimension

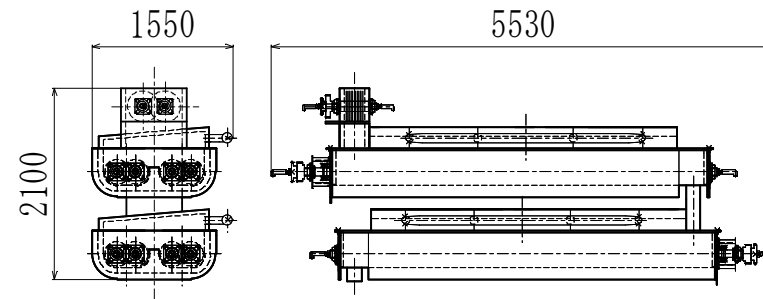
Type	Input	Steam amount	Power supply
	kg/hr	Kg/hr	kW/hr
KS-4-1	100	120	4.5
KS-4-2	200	240	9
KS-4-3	300	360	13.5
KS-4-4	400	480	18

On following condition
 Initial moisture rate 80%
 Output moisture rat 20%
 (Steam pressure : 0.5Mpa)

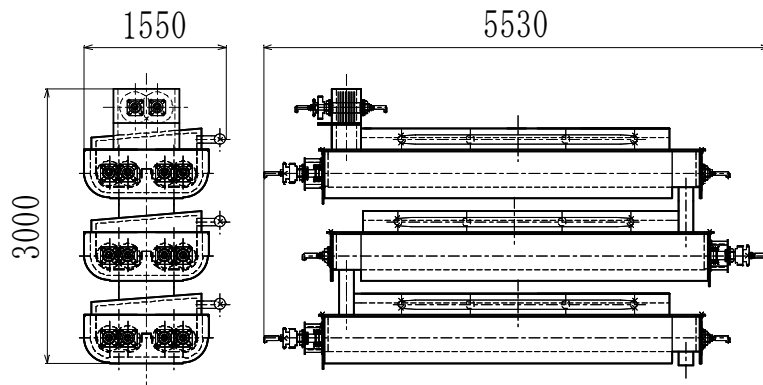
KS-4-1



KS-4-2



KS-4-3



KS-4-4

