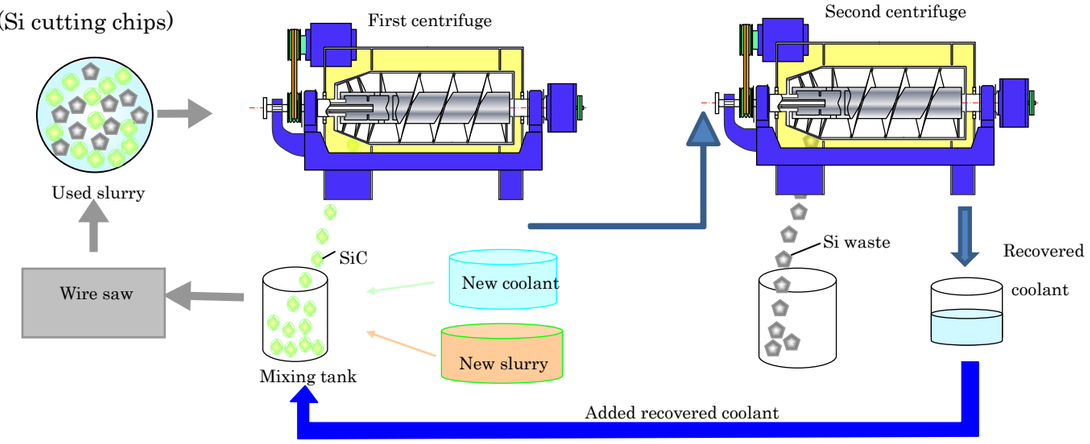
Slurry recycling system of two-stage processing for recycling disengaged grain and coolant

It will enable recycle of abrasive grains and coolant by separating respectively and removing foreign materials (Si cutting chips)



: Abrasive grains

: Chips

: Coolant (Recovered dispersing agent)

＜Outline of slurry recycling system＞

① Used abrasive grain slurry discharged from wire saw is separated by first centrifuge to recover abrasive grains.

② The primary separation liquid is further separated by second centrifuge to recover coolant; chips are discarded.

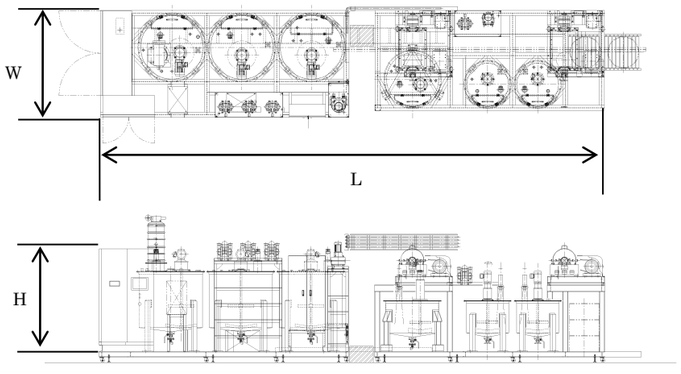
③ Recovered abrasive grains and coolant are mixed by adding new slurry (new abrasive grains and coolant), if necessary, to make regenerated slurry.

※The above process is fully automated

Standard specifications

Type / Item	Unit	TU-015DT	TU-015TT	TU-030DT	TU-030TT
Throughput	M^3/D	2～3	3～6	6～10	13～20
Outside size(W×L×H)	m	1.9×9.9×2.8	2.2×12.2×2.8	2.8×15×2.9	2.8×16×3.2
Abrasive grain(SiC) recovery rate	%	80～95	80～95	80～95	80～95
Coolant recovery rate	%	80～95	80～95	80～95	80～95
Si removal rate	%	40～50	40～50	40～50	40～50

TU-030TT type for large size



Slurry recycling system of one-stage processing for recovering

Recover only abrasive grains by using one centrifuge

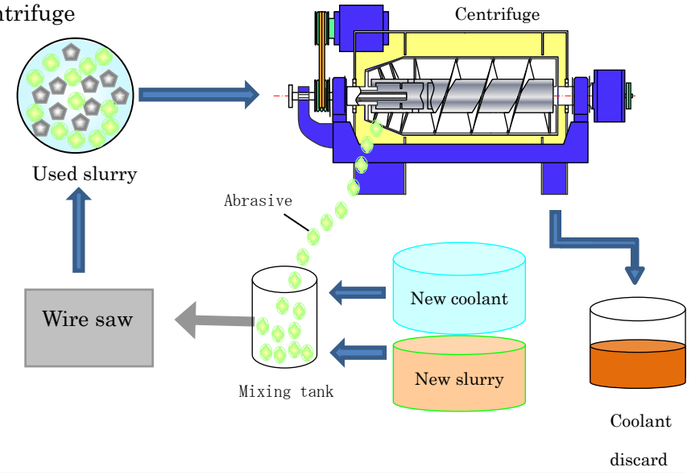
＜Outline of slurry recycling system＞

① Used abrasive grain slurry discharged from wire saw is separated by centrifuge to recover abrasive grains.

② Mix new coolant with recovered abrasive grains、

③ Make regenerated slurry by adding new slurry (new abrasive grains or new coolant) if necessary.

※ The above process is fully automated



Type / Item	Unit	TU-015ST	TU-015SDT	TU-030ST	TU-030SDT
Throughput	M^3/D	5～8	10～15	12～20	25～40
Outside size(W×L×H)	m	1.9×8×2.8	2.2×10×2.8	2.8×13×2.9	2.8×15×2.9
SiC recovery rate	%	80～95	80～95	80～95	80～95
Coolant recovery rate	%	20～30	20～30	20～30	20～30
Si removal rate	%	60～80	60～80	60～80	60～80

Coolant recycling system for diamond wire (fixed abrasive grain)

Recycle coolant from wire saw used by diamond wire

＜Outline of slurry recycling system of fixed abrasive grain＞

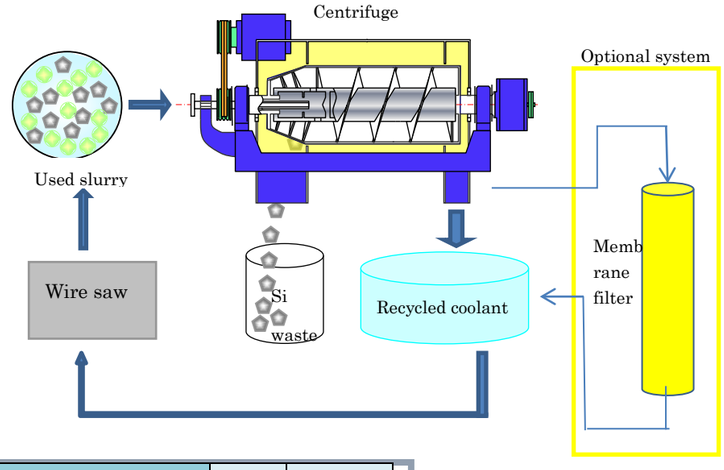
① Used abrasive grain slurry discharged from wire saw is separated by centrifuge and recycles coolant.

② Mix new coolant with the recycled coolant, if necessary.

③ Combination with membrane filter (UF) is applicable

※The above process is fully automated.

(Pilot equipment)



Throughput	M^3/D	1～20
Coolant recovery rate	%	95
Si removal rate	%	40 (98*)

(* in case of using filter)