

# "Japan Style Wet Type Nugget Plant" SANRITSU MACHINE INDUSTRY CO., LTD.

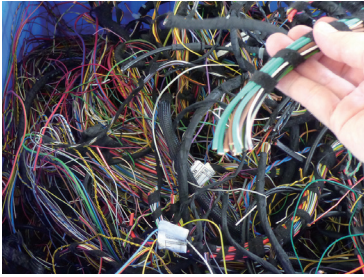


## Wet Type Nugget Plant Enabling Recovery of High-Grade Copper – Outline of WN-800

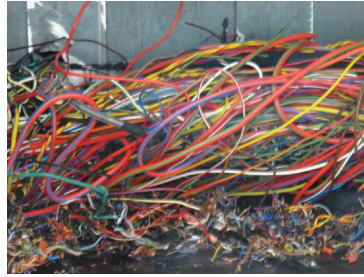
- Automobile wire harnesses and home appliance cords (cable scrap) are difficult to process. Because they contain many connectors and other auxiliary parts, pretreatment is time consuming and copper yield (copper content) is low. The Wet Nugget Plant (WN-800) is a waste electric cable treatment plant which makes it possible to recover valuable copper resources at a high quality by crushing these kinds of waste electric cables to nuggets, the size of rice grains, followed by gravity concentration.
- Separation and collection can be performed automatically, from charging of the raw materials (waste electric cables) to the crushing process, wet-type gravity concentration process, dehydration and drying process (copper side) and receiving in the collection box.
- A wet-type gravity concentration (thin-flow concentration) method using flowing water and vibration is adopted, achieving a copper recovery rate of 98% or higher from wire harnesses. Thanks to this extremely high copper recovery rate, there is very little loss to the cable coating side, and highly accurate separation is realized.
- The plant includes a patented technology called the "Miss-cut collection mechanism," which is a function for continuous removal of materials called "miss-cuts" (unstripped wires) having an intermediate specific gravity. This device enables stable recovery of high-purity nuggets.

Specification	WN-800, Full Specification Package
Size	10.0(L) x 6.0(W) x 3.5(H) (m)
Power source	3-phase, 415 V, 27.48 kw
Throughput (treatment capacity)	100-200 kg/hour (gross) φ2.5 crushing: 100 kg φ4.0 crushing: 200 kg

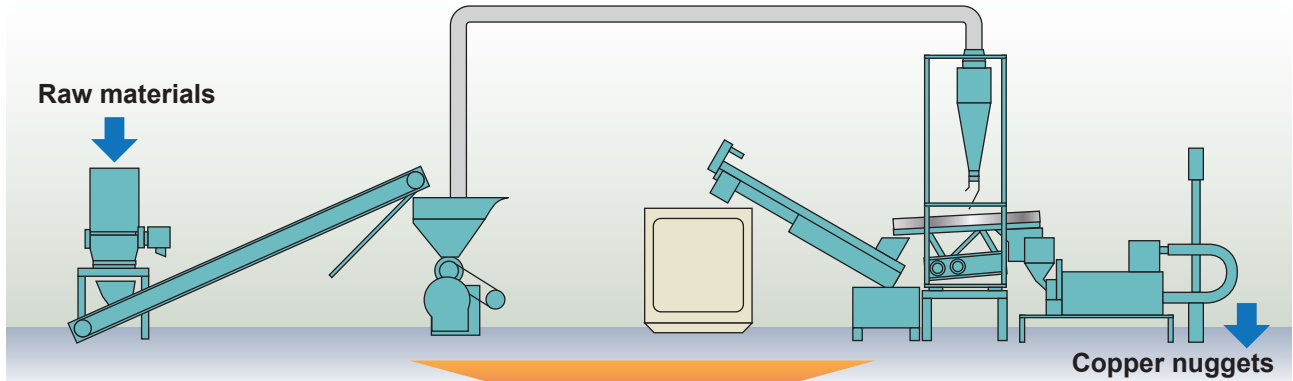
Wire harnesses



Rough crushing



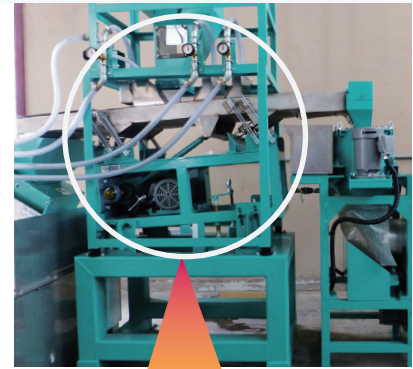
Copper nuggets



Crusher

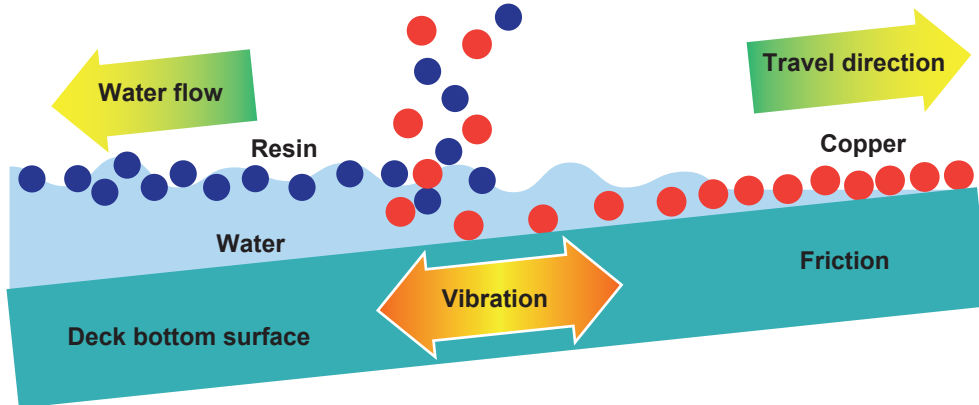


Wet-type gravity concentrator



### Principle of Wet-Type Gravity Concentration (Thin-Flow Concentration)

Covered wire (low specific gravity) is carried to the low side of an inclined deck by the water flow, while copper wire (high specific gravity) is discharged in the direction of vibration by friction with the bottom surface of the deck, and is separated. In comparison with dry-type gravity concentration, the wet type has excellent separation accuracy (98-99%) and boasts a high copper recovery rate, even with wire harnesses and other fine wires.



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