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(71) Applicant: **CONTINUUM POWDERS CORPORATION** [US/US]; 27705 Dutcher Creek Road, Cloverdale, CA 95425 (US).

(72) Inventors: **CHARLES, Matthew**; 1310 Wilson Road, Cloverdale, CA 95425 (US). **MEESE, Paul**; 528 Sunnyvale Drive, Healdsburg, CA 95448 (US). **MCINTIRE, Jeff**; 18070 Center Road, Castro Valley, CA 94546 (US). **HENNON, Ron**; 201 North Street, Cloverdale, CA 95425 (US). **NUTTALL, Jonathan**; 2055 Range Avenue, Apt. #132, Santa Rosa, CA 95401 (US).

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(74) Agent: **GRATTON, Stephen, A.**; 2764 South Braun Way, Lakewood, CO 80228 (US).

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(54) Title: CONSOLIDATOR SYSTEM AND METHOD FOR PROCESSING FEED MATERIALS

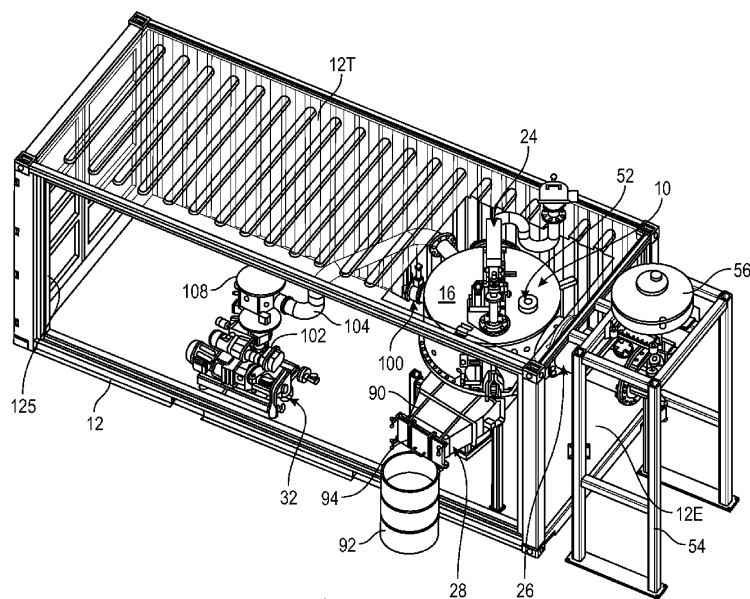


FIG. 1A

(57) Abstract: A consolidator system [10] for processing feed materials includes a reactor vessel [16] having a sealed process chamber [18], a rotatable indexing table [20] in the process chamber [18] having a plurality of separate melting hearths [22]; a melting system [24] in thermal communication with the melting hearths [22] configured to melt a feed material [14] in the melting hearths [22] into a molten metal; a feeding system [26] configured to feed the feed material into the melting hearths [22]; and a collection system [28] configured to collect consolidated metal pucks from the melting hearths [22]. The consolidator system [10] also includes a fluid cooling system in fluid communication with the melting hearths [22] configured to cool the feed material [14] into molten form into the consolidated metal pucks in solid form. The consolidator system [10] also includes a sensing system [100] and a control system [50] configured to control the feeding system [26], the indexing table [20] and the melting system [24] using input from the sensing system.

[Continued on next page]

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