

Automatic Melt Supply System

CARRIER

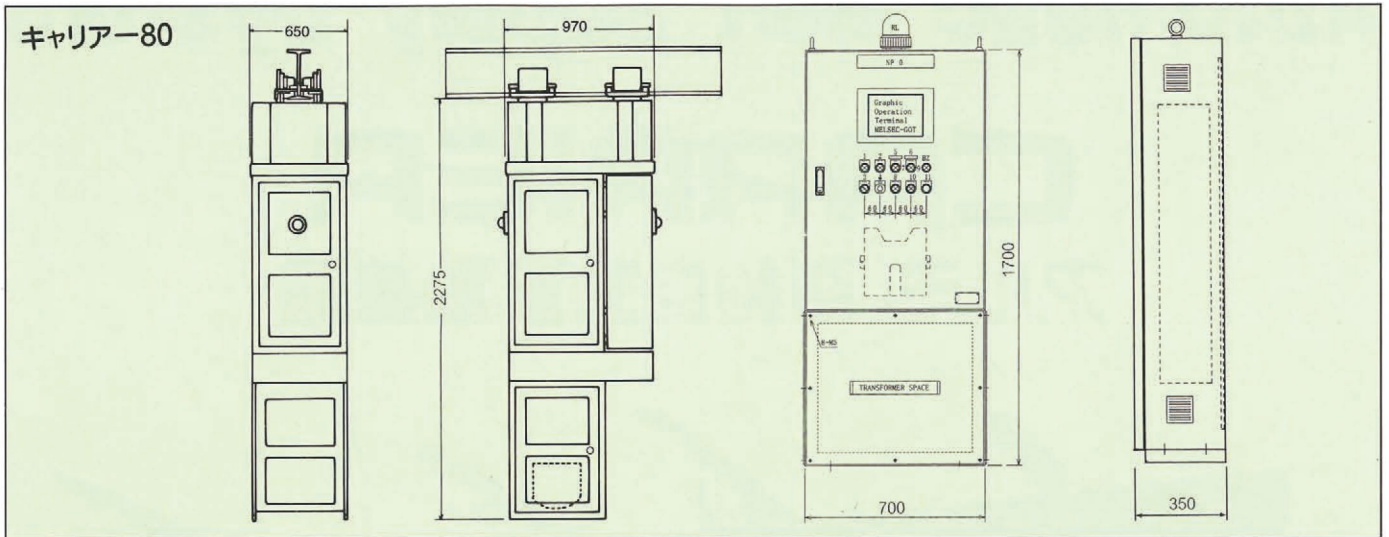
アルミ、亜鉛自動配湯装置



株式会社

広築

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(GENERALS)

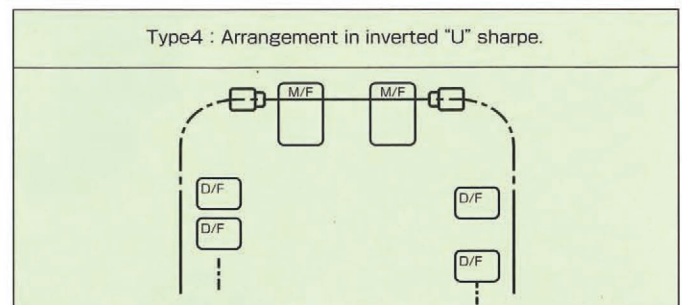
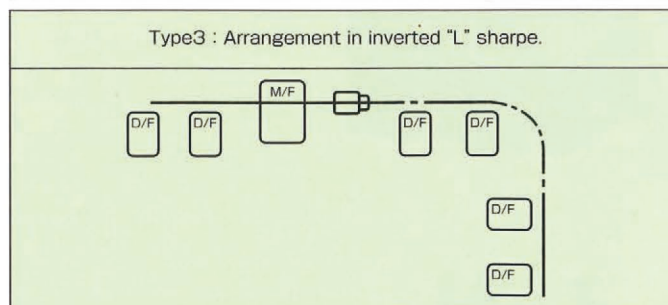
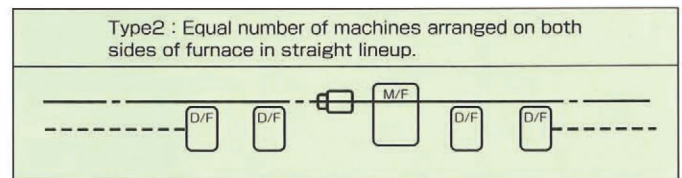
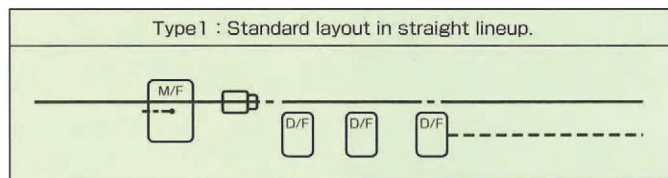
1. The automatic melt-supply system is intended for hot-charging an aluminum or zinc alloy (melted in the central melting furnace) into the dosing furnaces attached to the diecasting machine.
2. Its operation-cost such as electric power consumption being very low, it offers a great merit of economical production.
3. It serves to ensure stability in the founding condition. In controlling the founding operation, the most important factors are correct control of the melt-temperature and the quantity of the melt.
4. This enables you to curtail the labor power for the melt-supplying operation and that much more time and attention can be directed to quality control and improvement of productivity.
5. The speed of transporting melt, the time needed for melt-supply and the quantity of melt can be controlled and adjusted.
6. The system is equipped with a warning lamp, an alarm buzzer and a safety-cover. It is also equipped with a safety-device to prevent spilling of the melt during operation. Thus a near-perfect safety operation is ensured.

(概要)

1. 自動配湯装置は集中溶解炉（親炉）にて溶解されたAl,又はZn合金を各ダイカストマシン手許炉へホットチャージすることを目的とします。
2. 自動配湯装置は消費電力量が少なく、安いコストで大きなメリットを生む事ができます。
3. 鑄造作業管理上、一番必要な条件である熔融金属の温度管理及び溶湯量が常に安定し、一定した鑄造条件を得ることが出来ます。
4. 材料供給のための作業員が省け、製品の品質管理に専念でき生産性が良くなります。
5. 運搬速度、配湯時間、配湯量等の動作の設定が調整できます。
6. 警報ランプ、警報ブザー、安全カバーを付帯し、また運転中に熔融金属をこぼさないための安全装置を付帯し、安全対策には充分留意しております。

SPECIFICATIONS

Specification	Al	Zn
Melt Quantity (per charge)	40kg, 60kg, 80kg	120kg, 180kg, 250kg
Supply Distance (Main Furnace to Dosing Furnace)	60~80m	60~80m
Travelling Speed	40m/Min	40m/Min
Supply Capacity	Max 1.2Ton/H	Max 3.5Ton/H
Power Supply	440~200V 3φ	440~200V 3φ
Driving System	Trolley Duct System	Trolley Duct System



大型アルミ溶湯自動配湯装置：CARRIER-200 SYSTEM

Large-Scale Automatic Aluminum Melt Supply System : CARRIER-200 SYSTEM



概要 Outline

アルミ鋳造工場で大容量の溶湯を無人で、且つ、安全に各鋳造個所への配湯を目的に開発されました。
鋳造ライン内溶湯管理が自動化出来き、省人、省エネに貢献致します。

This SYSTEM is designed to supply large quantities of melt to individual forging shops in an unmanned and safe operation in an aluminum forging plant.
This SYSTEM automatizes melt management in forging lines, and contributes to labor and energy savings.

仕様 Specification

名称	: Carrier-200 Name : Carrier-200
目的	: アルミ溶湯搬送配湯 Purpose : Transportation and supply of aluminum melt
走行方式	: オーバーヘッドトロリー方式 Driving system : Overhead trolley system
配湯能力	: 平均2.5T/Hr Melt supply capacity : 2.5 tons/hr on an average
配湯取鍋容量	: 200kg/ch Capacity of a ladle for melt supply : 200 kg/ch
取鍋	: 保温耐火物施工(蓋、受湯樋、出湯チューブ、レベルセンサー付) Ladle : Made of heat-insulating refractories (with cover, melt-receiving launder, tapping tube, and level sensor)
受湯要求	: レベルセンサースキャン方式で常時確認、200kg減で出力 Request for melt supply : level-sensor scanning monitors continuously the melt status. Output occurs when the weight is reduced by 200 kg
配湯経路	: 直線及びU字型 Travelling route for melt supply : Straight and U letter-shaped lineups
配湯距離	: 直線50m Travelling distance for melt supply : Straight line of 50 m
配湯サイクル	: 約4.8分/回 Melt supply cycle : About 4.8 minute/charge
配湯取鍋保温装置	: 天井ヒーター(2.2kw×3本)加熱 Device for warming up the ladle : Heating with ceiling heaters (2.2 kw x 3 heaters)
受湯方式	: 溶解炉側ポンプ出湯 Melt receiving method : Pump-aided tapping on the side of melting furnace
受湯量検知	: レベルセンサー(取鍋天井取付) 満量検知信号が溶解炉側ポンプ制御回路にフィードバックされ、出湯量がコントロールされる Detection of melt quantity received: Level sensor (mounted on the ceiling of ladle) A signal detecting the full quantity is given to the pump control circuit on the side of melting furnace, and the quantity to be tapped is controlled.
取鍋内保持温度	: 700~730℃ Temperature maintained inside the ladle : 700°C to 730°C
配湯方式	: 取鍋傾動配湯方式 一軸回転方式により配湯時の溶湯落下点の移動が無い Melt supply method : A ladle inclines to supply melt. The single-axis rotation method prevents movement of a melt dropping spot during melt supply.
配湯量検知	: 取鍋傾動角検知 Detection of melt quantity tapped : The angle of inclination of the ladle is detected.
基本走行速度	: 3~40m/min Basic travelling speed : 3 - 40 m/min
昇降速度	: 13m/min Going up/down speed : 13 m/min
傾動速度	: 20mm/sec Inclining speed : 20 mm/sec
主制御盤	: 自立型(W700×H1,600×D350m/m) Main control panel : Self-supporting type (W700 x H1,600 x D350 m/m)
副制御盤	: キャリアー本体付ショルダー型(W950×920×300m/m) Sub-control panel : Shoulder-type attached to Carrier main body (W950 x 920 x 300 m/m)
操作方法	: タッチパネル操作(自動、半自動)、緊急時手動操作 Operation method : Touch-panel operation (automatic, semi-automatic), manual operation in case of emergency
設備電力	: 16kw Power requirement : 16 Kw
電源	: 動力(200V)、制御(AC100V、DC24V) Power source : Motive power (200 V), control (AC100V, DC24V)
配湯装置重量	: 約1,300kg(溶湯:200kg含む) Weight of melt supply equipment: About 1,300 kg (including melt of 200 kg)