



VISHAY
PRECISION
GROUP



Market Solutions

Billet Weighing System

Allegany

A VPG Process Weighing Brand



Nobel
Elektronik



www.weighingsolutions.com

Billet Weighing Produces Significant Savings

- Delivering exact billet weights improves melt shop yield by 0.5%.
- Reduced tailings improve rolling mill yield by 0.5%.
- Achieve weighing accuracy of ± 1 kilogram per every 1000 kilograms.

Visit <http://www.weighingsolutions.com>, use the on-line billet weighing system calculator, and see exactly how much you can save.

System Payback

With over 25 systems in operation worldwide, documented return-on-investment (ROI) statistics prove that savings from reductions in shorts and scrap will pay for an installed system in less than a year. Manufacturers that installed billet weighing systems in 1987 are still reaping the benefits today.

Typical caster torches cut all billets to a given length. Cutting to length, however, results in large variances in actual billet weight. Rolling mills roll by weight rather than length. Overweight billets leave rolling mill customers

with extra “scrap” steel, which has to be returned and remelted. Cutting by weight, rather than length, resolves the scrap/ remelt problem. Rugged construction and an easily customized operating system ensure that billet weighing systems will work for any caster in any environment.

Cutting Billets by Weight Negates all Caster Variables

Many factors contribute to cross-sectional density variations as billets are produced, especially as the “heats per mold” ratio increases. Factors include:

- Mold abrasion
- Metal temperature
- Ferrostatic pressure
- Caster speed
- Spray cooling water volume and temperature
- Inconsistent torch “home” position
- Proximity and temperature of other billets on the strand



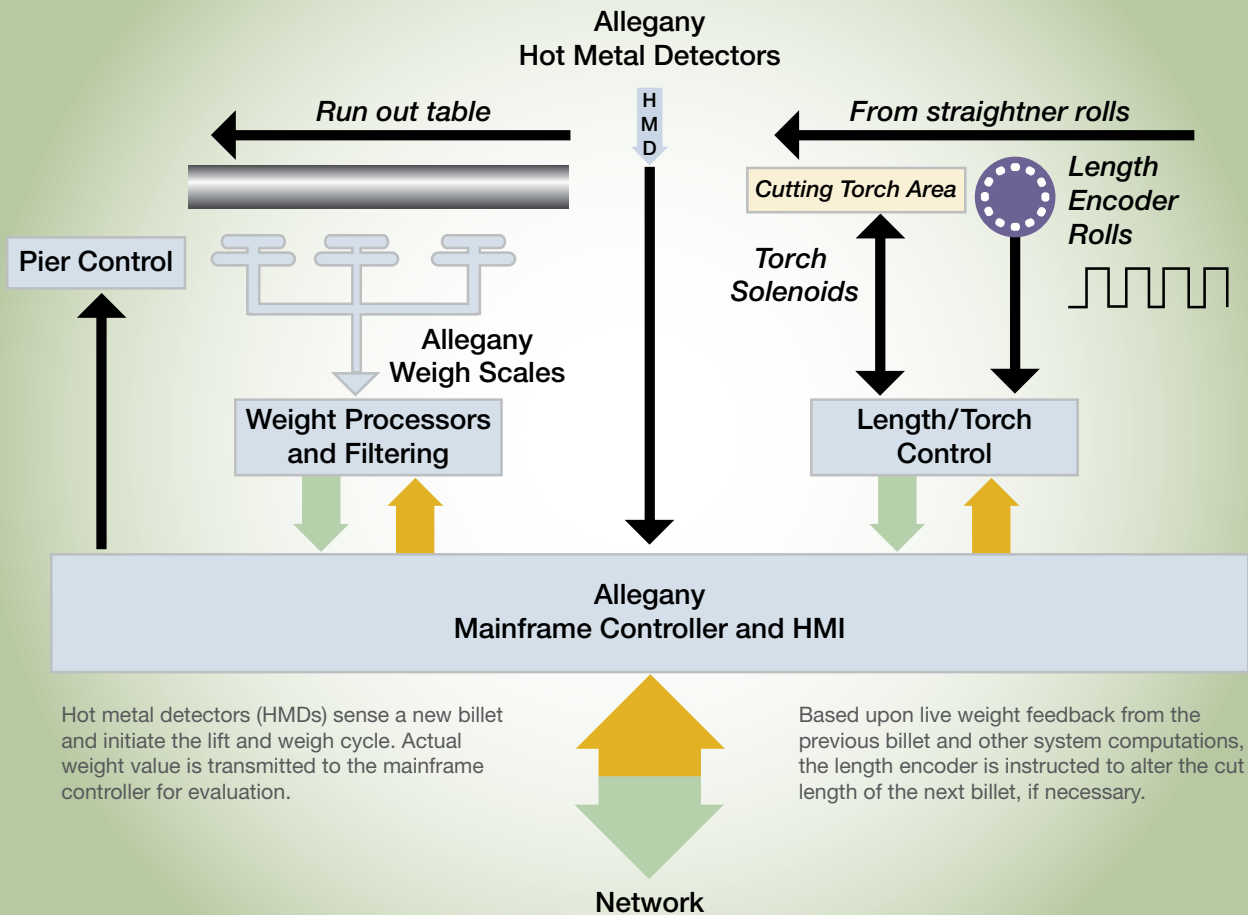
Adaptive Feedback Activates the Cutting Torch

An adaptive filtering algorithm computes and dictates the cut length for each successive billet. Torches or shears are activated based upon analysis of the following criteria:

- The billet previously weighed
- An historical evaluation of strand densities
- Trend analysis software
- Input for the length measurement encoders
- Maximum “prime cuts” per heat



Complete Caster Control



Note: Components and functions designated by the color blue are supplied/performed by Allegany equipment.

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