



Life Fitness doubles its production due to gas catalytic infrared

Two gas catalytic ovens from Heraeus are helping Life Fitness in Illinois, USA to double production and save costs. The new system was installed quickly during scheduled facility down-time and was operational in less than a month. Life Fitness has been offering high quality fitness solutions for 45 years to benefit both facilities and exercisers, using a wide range of cardio, strength and group training products. The fitness equipment is coated with powder lacquer, which is cured by heating. The predicted growth in their product line and coating schemes required a significant expansion of their powder coating operation with only a limited increase in plant size. Until now the curing process was achieved exclusively with a convection oven. Some parts require two top coats and these are rehung after the first coat to facilitate the second coat and cure. In order to integrate single and double coated parts into the continuous flow line, whilst preventing powder contamination, pre-planned gaps are required to re-hang parts requiring a second coat. This process had always been an ergonomic issue as no mechanical lifts are available due to lack of space. The line was operating at 2.4 m/min, but effectively with the double application, the part yield for two coat parts was only 50%. One option was to add another convection oven to cure the first coat before applying the second coat. Since floor space was at a premium this was not going to be a feasible or a cost-effective alternative.

The smartest solution was to add two Gas Catalytic IR Pre Gel Ovens from Heraeus. After successful tests were carried out in our Buford facility, a two-line system was launched. Today, two lines run parallel, one for parts with one coating and one for parts with two coatings. Each line has a gas catalytic infrared oven and a corresponding paint booth. For the final curing, the lines run through the existing convection oven. This system achieved the desired 2.4m/min. line speed along with the option of going to 3m/min. More importantly, even though the line speed has not changed, the output of the powder coating plant has doubled. The introduction of Gas Catalytic IR technology from Heraeus has ensured additional savings on Natural Gas and Electrical costs. The adoption of the latest technology has also attracted local Utility grants which has helped to reduce the overall capital spend.

Adam Pederson, Manufacturing Engineer of Life Fitness, says: "I have been truly impressed with final result we achieved by working with Heraeus. The process of planning, testing and implementation has been smooth and we now have a very effective powder coating system which incorporates the latest technology."



Features

- Curing of powder coating on fitness equipment
- Output of plant doubled
- Energy and cost savings

Technical Data

- Installation of 2 gas catalytic infrared pre gel ovens
- Two-line system as some parts require double coating
- Line speed from 2.4m/min. to up to 3m/min. if desired

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