CASE STUDY

# Symmons Building Management

# Identifies Failed Non-Symmons Shower Valve Cartridges



## Platform data uncovers ongoing shower valve crossover risking cold showers

This Boston hotel installed Symmons Evolution Building Management System to monitor its water system's tracking trends and domestic cold, hot, and hot water return temperatures. Symmons Evolution immediately noted after installation that half of the risers in the hotel were operating outside of their desired temperature ranges. The temperatures were sporadic, and consistent temperatures were not being achieved across the system.

> *No kidding. You don't have to sell me on this anymore. Just show me the data. This is obvious that everyone will have this system soon. I'm getting killed. Let's just find the problems now.*
> ***Chief Engineer, 3-Star Branded Hotel***

### CHALLENGE

Guests could experience showers that were insufficiently hot. Risk of scalding could increase on faucets due to temperature inconsistencies.

### SOLUTION

Initially it was thought that four of the risers had gate-style valves that were shut off. The Symmons Evolution data and a series of tests determined that many of the hotel's shower valve cartridges (non-Symmons brand) had failed. Based upon this finding, all of the hotel's failed shower valve cartridges were replaced.

### RESULT

The hotel's water system operation improved dramatically. Domestic hot water return temperatures normalized.

Before the shower valves were repaired, the domestic hot water return temperatures were higher than the domestic hot water supplying the risers. After the shower valves were repaired, the domestic hot water return temperatures were lower than the domestic hot water supplying the risers.

- ☑ Immediate insight into temperature differences in water system
- ☑ Decreased diagnosis time, which led to faster, less-costly fix
- ☑ Reduced the risk of guest scalding when using faucets

**Before shower valves were repaired**

| RISER LOCATION | SUPPLY | RETURN |
|---|---|---|
| 05-07 Riser | 103˚F | 115˚F |
| 04-06 Riser | 117˚F | 118˚F |
| 01-03 Riser | 108˚F | 115˚F |
| 00-02 Riser | 104˚F | 115˚F |

Domestic hot water riser return at **HIGHER** temperature than domestic hot water supply

**After shower valves were repaired**

| RISER LOCATION | SUPPLY | RETURN |
|---|---|---|
| 05-07 Riser | 120˚F | 119˚F |
| 04-06 Riser | 127˚F | 117˚F |
| 01-03 Riser | 122˚F | 122˚F |
| 00-02 Riser | 127˚F | 123˚F |

Domestic hot water riser return at **LOWER** temperature than domestic hot water supply

**Savings after implementation**

**$800**
Cost of engineer to diagnose issue and create plan of attack

**$1,740**
Cost of room comps per night when 10% of guests complain

**$3,480**
Cost of room comps per night when 20% of guests complain

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