

PHILIPS ARENA

Atlanta, Georgia



husseyseating[™]

YOUR PARTNER FOR SEATING SOLUTIONS

CASE STUDY



SALVAGING PROBLEMATIC SEATING PLATFORMS

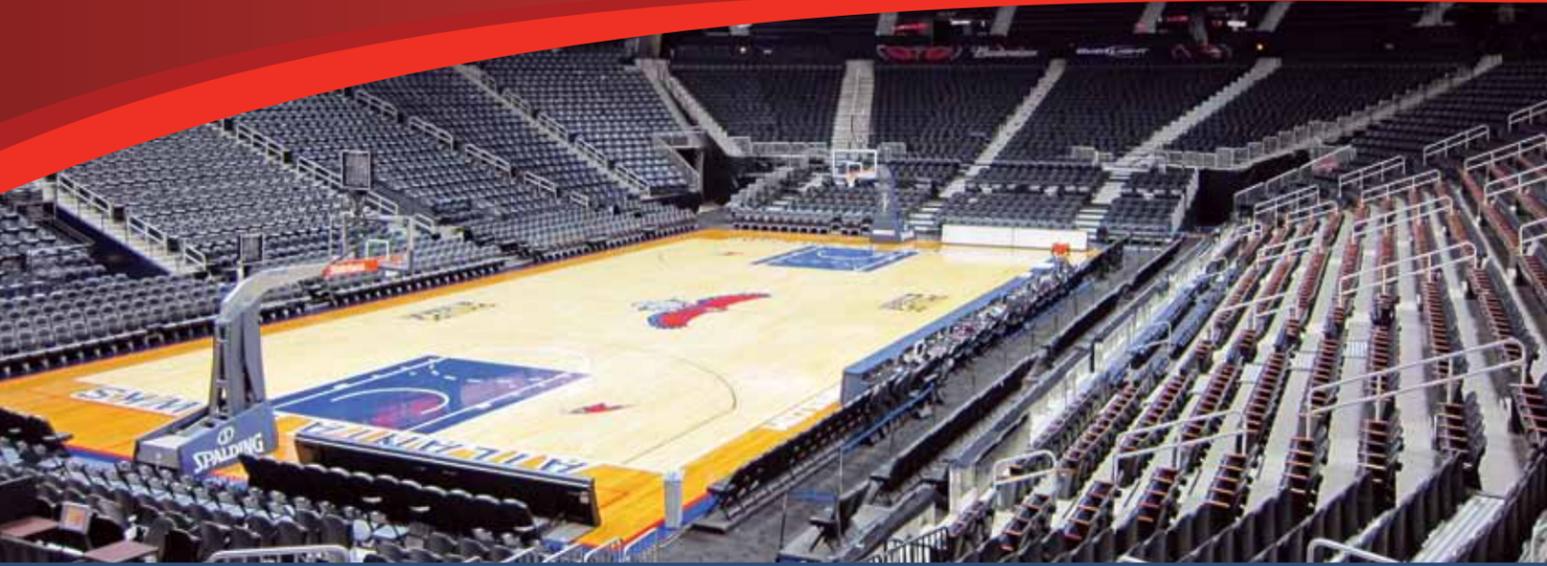
Philips Arena is the cornerstone of Atlanta's downtown entertainment scene. The Arena is also one of the top multi-purpose sports and entertainment venues in the world, hosting more than 160 events annually.

The arena already had a demanding changeover schedule with NBA and NHL games, as well as events. Imagine the headaches when the custom telescopic seating system started breaking down on a regular basis. Changeovers became riddled with equipment failures and crew safety hazards that increased the time, labor costs and exposure to unsafe situations.

10 years of normal use had resulted in extraordinary damage, so it was clear to the arena's managers that simply restoring the system to its original specifications was only going to start the cycle again.

Philips Arena needed a better solution. The managers approached Hussey Seating's National IAVM Service team, knowing we would work on any manufacturer's system and would develop improvements solve the problems for the long term.

► ***Read on to see how Hussey was able to develop unique solutions to salvage the system and extend its longevity without a significant interruption in business.***



THE HUSSEY ADVANTAGE

Hussey's service group called on their experienced team of factory inspectors and certified installation technicians to first understand the operational and safety issues with the system and then determine the root causes.

Hussey went on to provide a comprehensive plan to repair the damage and make critical improvements. The solutions were designed to optimize the equipment and deliver superior performance well into the future.

Deficiencies were found in three areas of the telescopic system: the casterhorns, the MSL components, and the upright frames.

CASTERHORN ISSUES

The Problem:

The thin material of the original casterhorns was damaged and deformed, contributing to binding and uneven tracking during operation.

The Hussey Solution:

Steel flat stock was custom sized and welded to straighten and reinforce the frame casterhorns on all rolling frames. This was a much more cost-effective method than replacing the frames or casterhorns that were damaged, and will help prevent future damage. This long-term solution strengthened the entire system and will prevent continual component replacement.



Reinforced Casterhorns



Straightened Casterhorns

MSL COMPONENT ISSUES

The Problem:

The chain-driven portion of the Multiple Site Line system causing issues in the upright frame columns also incorporates limit switches for the upper and lower deck positions that turn off the drive system when the decks reach the proper position.

Many of these limit switches were not properly set and adjusted, and consequently the decks were not locking into place. Under these conditions, an improperly engaged deck in the upper position could break free and drop down when loaded.

The Hussey Solution:

To fix the problem, all of the frames were disassembled. Each component was cleaned and inspected. Damaged parts were repaired or replaced, and the frames were then reassembled to the original specifications. After all the necessary reinforcements to the upright frames were complete to solve the issues in that area, the limit switches were reset to ensure that all decks would stop in the correct position and lock into place.



MSL Components



Limit Switch Reset

UPRIGHT FRAME ISSUES

Problem #1:

The MSL design does not have an interlock at the top of the frames, causing a lot of "sway" at the top of the frames during operation. Over time this stress on the upright frames had caused the steel to lose its original shape and positioning, resulting in binding during operation.

The Hussey Solution:

A custom designed hydraulic ram jack was used to re-align casterhorns and the upright frame columns back to square. Once the frames were in the proper position, steel tubing was welded into place to hold the frames square. Adding this steel tubing at the base of the frames alleviated much of the "sway" during operation. The reduction in sway provides a safer platform, improves operational efficiency, and extends the life of the system.



Upright Tubes



Frame Square Jack

Problem #2:

The MSL system raises and lowers the decks via a chain drive system inside the frame columns. With this design, no connection exists between the frames at the top where the decks connect. This also contributed to the problem of "sway" during opening, closing, raising, and lowering on the higher tiers of the frame column. The result was binding during operation and the inability to get the units to align properly when they were fully open or closed.

The Hussey Solution:

Steel channel was welded to the upper ends of the frame columns to strengthen this area and deliver greatly improved operation. In addition, all rolling wheels at the cantilever arm were inspected and repaired or replaced as needed. This reduced friction and allowed the frames to track better during opening and closing operations.



Upper Guide Wheel Before



Upright Guide Fix



Upright Guide Fix

Problem #3:

There was only one lower guide on the triple telescoping frames. When the frames were fully extended, the chain from the drive system was the only thing holding the frame columns together at the top.

The Hussey Solution:

An additional guide for these frames was designed, fabricated, and installed at the top of each frame column. This provided a secure connection and kept the frame columns from separating when the equipment was extended.



Guide Before



New Guide Top View



New Guide Side View

THE PAYOFF

The Hussey team identified and corrected all of the deficiencies, completing the work on time and on budget. Philips Arena got a properly functioning system again without having to resort to the time and expense of a complete system replacement. The longevity of the system was extended, and the operations team has dramatically reduced time and labor costs of changeovers while providing a much safer work environment for their team.





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CASE STUDY

PHILIPS ARENA

Atlanta, Georgia



Replacing a track bearing on the casterhorn



Welding to square the frame upright and casterhorn

FACILITY PROFILE

Philips Arena:
Atlanta, GA

Seating Capacity:
18,000 – 21,000 depending on configuration

Infrastructure Age:
Opened in September 1999

Serves:
Metro Atlanta community and the southeastern US

Facility Mission:
Hosting approximately 160 events & 1.6 million guests annually

Events Hosted:

- Top-ranked concert tours
- Professional and collegiate sporting events
- Family shows and conferences

Keys to Venue's Success:

- Unique arena design
- Great sightlines throughout
- Cutting edge technology
- Extraordinary acoustics
- Spectrum of events hosted & patron amenities

PROJECT PROFILE

Application:

- Arena spectator seating

Scope of Work:

- Structural repairs and improvements to variable rise telescopic platforms

Banks Serviced:

- 2 variable rise end zone seating banks

Product Serviced:

- Interkal/GDS - MSL (Multiple Sight Line) Telescopic Platform System

Components Serviced:

- Casterhorns
- MSL components (upper and lower limits, recess guide system)
- Upright Frames (MSL variable rise frames)

Project Completion Date:

- December 2008



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