



Smart Solutions

Case study: Longwall face alignment

Application: *Underground coal*
Location: *Illinois-basin, United States*
Products featured: *Joy 7LS, PRS*

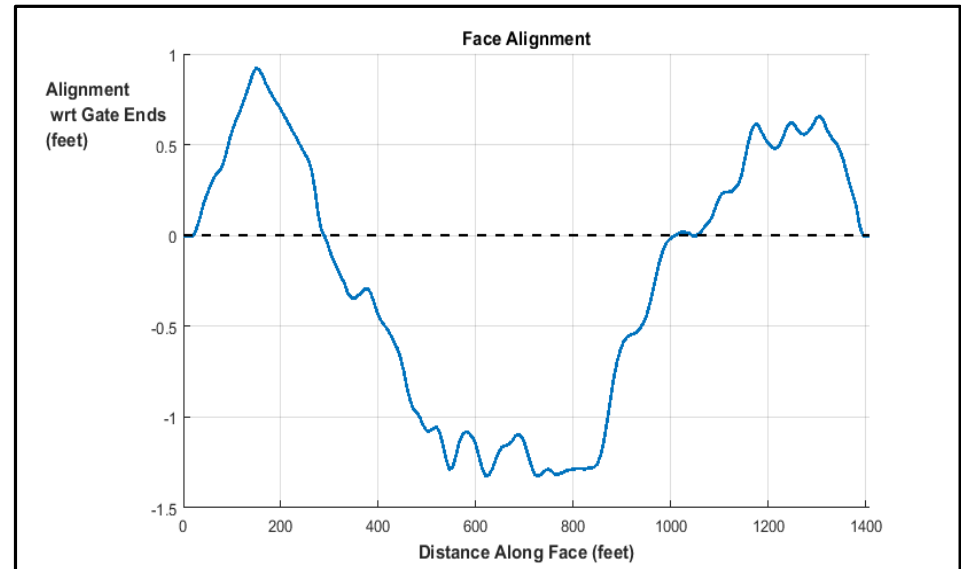
Challenge: Face misalignment

Maintain longwall face alignment without the need for human intervention and string-lines.

Correct face alignment maintains **production efficiency** and **safe roof** conditions.

Contributing factors:

- Wide coal face (1400ft)
- Varying roof conditions
- Varying entry width development
- Varying seem roll



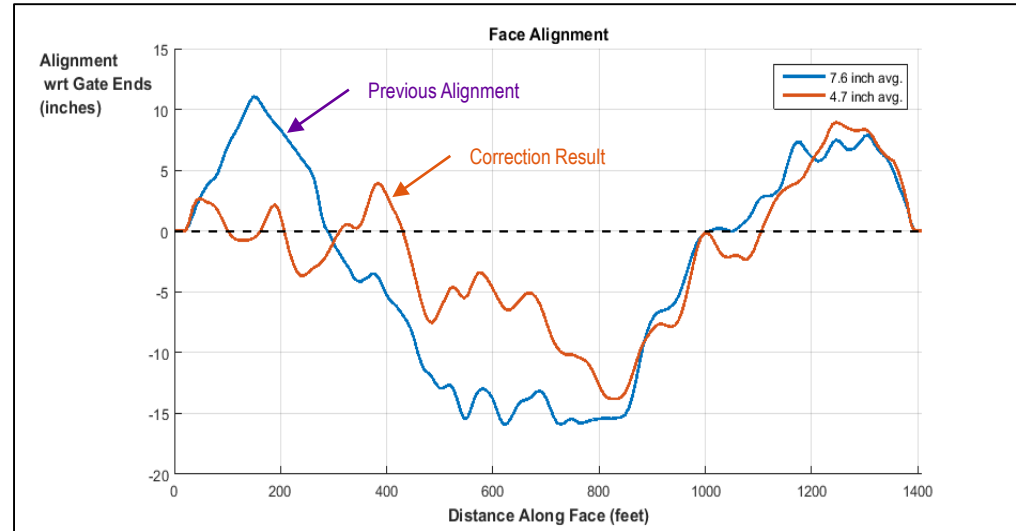
Solution: Automated face alignment correction

Development of automated process to align the longwall face.

Process gradually brings face back into alignment.

Prevents drastic changes but improves towards ideal conditions

Removes additional personnel through automated process



Results:

↑ 31 % Improvement in Average Face Alignment.

↑ 66 % Improvement in Face Aligning Cuts

↑ 57 % Improvement in Gate Aligning Cuts

