



DSI ADDER SNAKE

LOW ANGLES TO HIGH ANGLES AND BACKWITH NO TRANSFERS

Location: Docks, storage sheds, long overland systems

Challenge: Economically and cleanly elevate material at some point along a mostly conventional-angle conveyor system.

Solution: The DSI Adder Snake

Scope: Limited only by available conveyor equipment

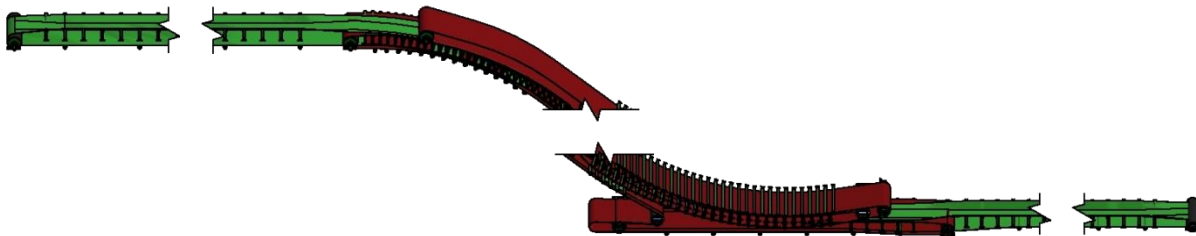


Figure 1: Complete Adder Snake arrangement

Sandwich belt high angle conveyors have long been known as the best solution for tight spaces where a steep lift is required to maintain a small footprint. However, applications are also quite common in which a large footprint is available, but a high angle is needed in just a small portion of the conveyor path. Because a sandwich belt system uses a wider belt to achieve the same conveying rate as a conventional conveyor at the same speed, in an application such as that described above, the question must be asked: Should you extend the tail of the sandwich belt, or should you break up the path into two separate conveyors, in which a narrow conventional conveyor discharges on to the wider Sandwich belt system?



Figure 2: Sandwich Conveyor fed by low-lift tripper

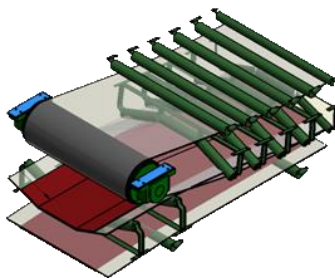


Figure 3: Adder Snake sandwich

For instance, a tripper may travel horizontally along the length of a dock to feed a perpendicular shiploader. In cases where the shiploader is at a considerably higher elevation than the dock conveyor, a standard tripper would require that the dock conveyor and dock be much longer than otherwise necessary, as its uplift would extend quite far back from its discharge pulley. Historically, the solution in this case would be to design a much lower-lift tripper, which would then feed on to a Sandwich Belt High Angle Conveyor. While this is a perfectly viable solution, which has been executed in the past as shown in Figure 2, it would be preferable to eliminate the conventional-to-sandwich transfer if possible.