

## CONDOR 4400mm Wide Belt Cleaner

### Project: JINDAL STEEL & POWER LTD, BARBIL

Jindal Steel & Power Ltd., is one of the industrial powerhouses in India, with a dominant presence in steel, power, mining, power generation and infrastructure sectors. The company produces steel and power through backward integration from its own captive coal and iron-ore mines.

### THE PROBLEM

JSPL in Barbil, Odisha, is a Pelletisation plant with a capacity of 9MTPA. The conveyor belt carrying green pellets, was facing severe carry back problems. The 4400mm wide belt was part of a complex mechanism feeding green pellet into the oven. Since the green pellet had high moisture content, and the material being sticky, carry back occurring was high, leading to spillage beneath the conveyor and material build up on the carrying rollers. Frequent cleaning of belt was required, leading to unscheduled stoppages which resulted in loss of production.

The plant was not satisfied with the solutions offered to them by various manufacturers. As the application was unique and required customised solution, standard belt cleaners from established players in the market, was not effective. Hence, the plant resorted to using in-house made scrappers, which had very low cleaning efficiency.

### THEJO'S SOLUTION

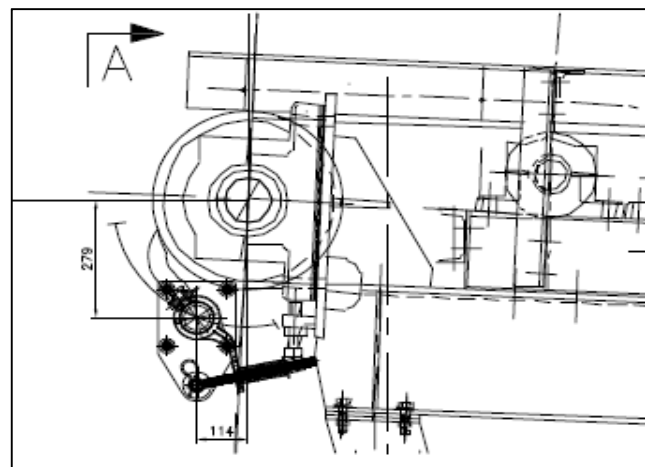
Our team of Engineers analysed the site and equipment over few days, and a proposal to resolve the issue was submitted. Detailed operating parameters and probable installation issues were also collected and communicated to the design and engineering team.



JSPL Pellet Plant, Barbil, India



Cleaner used previously. Note material build-up on the frame due to the faulty design



Mounting arrangement drawing of the cleaner

## CONDOR Heat Resistant Grade Belt Cleaner

After reviewing the operating parameters, it was decided to install a specifically modified design of Condor Primary Cleaner onto the discharge pulley. The project was handed over to the R&D Product Development team.

Due to the higher width of the belt, the scraper frame had to be custom designed. A heavy duty seamless pipe structure was used for the frame and additional strengthening was given to withstand the heavy load. Segmented PU Blades were formulated for the application. As the discharge chute was very compact, only limited space was available, special mounting brackets were designed. Extra heavy duty springs were then provided on the tensioning units.

The specifications of the cleaner is given below:-

Type of Cleaner	:	Thejo make CONDOR Primary Belt Cleaner
Type of Blade	:	Special Grade Moisture & Abrasion Resistant PU
Part No.	:	TCP-4400-N-S
Frame Width	:	5600mm
Blade Width	:	4400mm (in 3 segments)

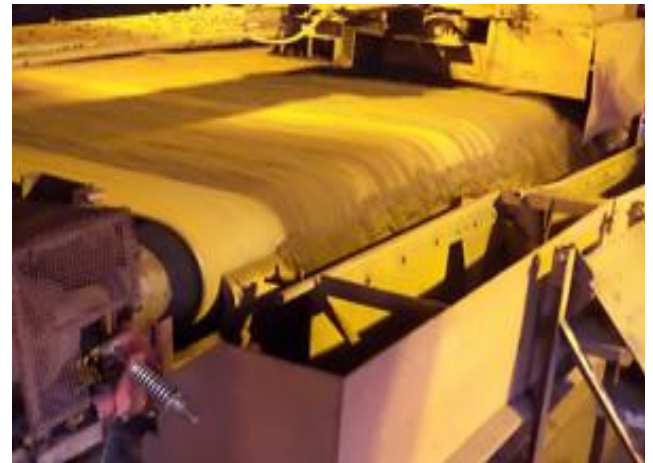
### CONCLUSION

The CONDOR 4400mm wide cleaner, arguably one of the widest in the world, started to show positive results almost immediately on running the conveyor after installation. The carry back was almost eliminated. As only one cleaner could be installed, a very small carry back persisted. The conveyor stoppages for cleaning reduced drastically and production increased.

Thejo have since successfully supplied & installed cleaners for belts widths ranging from 3000mm to 4400mm, across the country.



*CONDOR 4400mm Primary Installed on the discharge pulley*



*Installation at JSW, Bellary- 4000mm B/W*



*Installation at JSW Ispat, Mumbai-4000mm B/W*