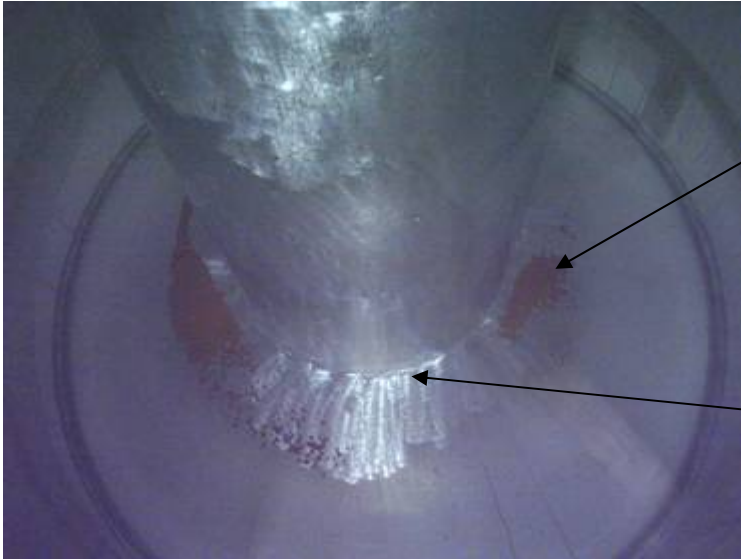


# HYDROSMART REPORT CD2

This is a report on the effectiveness of the Hydrosmart system trialed in cd2.

The Hydrosmart system has been in use on cd2 evaporator for the last 6 months. The Hydrosmart was placed on the pipework leading from the PHE to the PCD. The system was trialed to see if there was any benefit in using this system. The main problem with cd2 evaporator is on High Heat skim powders. When these products are made there is a tendency for a build up to occur on the surfaces on the top region. (refer Photo 1)



Build up occurs around base and on funnel of top region

These marks are from when operators have to scrape the build up off the surface. This causes markings which have to be buffed off

Photo 1 showing build up

The CIP will not remove all of the build ups so that the operators are required to scrape it off then rewash the evaporator. Scratches occur from the scraping. These in turn cause more build up to occur. Due to this the region has to be buffed to remove the scratches.

Normally after two runs of high heat products there is a noticeable build up. This means the evaporator has to be shutdown and scraped and then rewash. This can cause up to 6 hrs downtime on the evaporator.

Since the introduction of the Hydrosmart there has been a reduction of build up on the top region when producing high heat products. (refer photo 2 and 3)



Photo 2 showing base of top region



Photo 3 showing funnel of top region

Over the last month cd2 has manufactured 7 runs of high heat. Looking at the photos there has been no build up evident in the top regions. This means there has been no need for the operators to have to scrape the region.

Another benefit of the Hydrosmart system has been the longer run times on cd2.

Normally after 25 hours production the dsi starts to foul on the probe. This has caused the steam supply to the dsi to open more which in turn causes more fouling. Due to the extra heat the evaporator begins to lose vacuum which in turns causes more fouling through the evaporator.

Since the introduction of the Hydrosmart system the run times on cd2 evaporator on medium heat skims has increased. The longest run time to date is 44 hours. There is an opportunity to increase this out further. Time was limited to milk availability.

Due to less fouling in the dsi this has decreased the fouling through the rest of the evaporator which means the evaporator runs more efficiently for longer periods of time.

## BENEFITS

The benefits of having the Hydrosmart system on CD2 evaporator are listed below

- No fouling in the region
- No need to scrape the build up off the top region
- No need to buff the region to remove scratches
- Limits the times the evaporator has to be shutdown
- Increased run times
- More efficient operation

Thanks

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