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History

- The beginning – 1942
 - 1 water scrubber 104 Nm³/H Delivery to busses
 - Served 15 busses

- The years of forget – 1950-2001
 - Sadly most gas went to burning some to Electricity and heating



The golden Years 2001-

- 2001 - First off two water scrubber was build (Manufacturer Malmberg 400 Nm³/h upgraded gas)
- 2003 - second water scrubber was build (Manufacture Malmberg 500 Nm³/h upgraded gas)
- 2015 - One Pressure swing absorption (Manufacture Carbotech 2000/Nm³/h upgraded gas)
- Today's total produktion 3000 Nm³/h



New PSA



Advantages/Disadvantages

● Water scrubber Advantages

- Short start up time
- Clean
- Need only water and electricity

● Water scrubber disadvantages

- The gas get wet !!
- Pressure moves water quickly

● PSA Advantages

- Stable Process
- Dry process (normally no dryer is needed)

● PSA disadvantages

- Dirty Carbon **Everywhere**
- Long start up 20 min-4 hours
- Changing carbon is hard work

Lesson Learned on the way

- Build for the future
- Operate systems, Buy a fully developed world wide system, from the big ones.
- Changing an operating system under full production is hard Work
- Have the same system on all your plants.
- Have backup electricity
- Portable dryer



The end

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