

1a/b. Pampa, situated in the Great Plains area of Northwest Texas, is the company's third largest production site for acetic acid, its deriva-

tives and solvents. In January, 2002, Pampa celebrated its 50th anniversary.

2. John McCall occasionally glances at the fruits of his labor – highly efficient power generation in Pampa's turbine room.



2

any site and any work area regardless of whether the project is operational or transactional.

Another element that is crucial is questioning the current, or “As-Is” state. It is particularly important for the Black Belts to get their teams to challenge many of the ways things have been done in the past. People are often too quick to come up with answers: I know what the problem/solution is, we've always done it like this, it doesn't work any other way, etc. The answer should always be at the end of the Six Sigma process, not at the beginning.

A third important element is ensuring that all the people affected by the process participate in finding a solution. The process from the operator's perspective can be far different than how it is understood by maintenance personnel or process engineers. If everyone understands the entire process and sees that they can make a contribution to the improvement process, this gives an enormous motivation boost. Once you

give a team a very ambitious Six Sigma efficiency goal, you can hardly stop them after that.

◀ John, what results has your Six Sigma project in Pampa yielded so far?

▶ We have never used steam to generate power more efficiently in Pampa than we are now after the Six Sigma project. In the end we saved a great deal of money. To be more precise, the project generated about \$625,000 in cost savings per year.

◀ Seth, what do things look like for you?

▶ I have saved around \$800,000 on steam consumption in my projects in Bishop. We are now broadening our focus from simply saving energy to reducing fixed costs as well as focusing on growth by increasing production capacities. ◀

### Celanese relies on Six Sigma

Six Sigma is a quality improvement philosophy, which relies on statistical methods to analyze and eliminate variability from the ideal process. Six Sigma limits defects to 3.4 per million opportunities, which means that 99.99966 per cent of all opportunities lie within the specification limits. Six Sigma originally stood for a variation of six standard deviations from the mean value ( $\mu$ ) of an exactly centered normal distribution. Companies which have been rigorously using Six Sigma for many years, such as Dow and General Electric, have already saved billions. Celanese has been implementing Six Sigma in production as well as in administration since 2001. The initial cost-saving effects look very promising.