In an industry of high-quality, diverse beer brewed with passion, creativity and innovation, it is hard to imagine a less sexy topic than draft quality standards. However, it is one of the most important topics we all face as we bring our beer to our customers.

When beer drinkers have a sub-par beer at their local tavern or your brewpub, they do not blame the quality issue on poor draft maintenance, but instead blame the brewery for poorly brewed beer. And yes, it may be the brewery to blame, because it is up to us to change the draft quality standards in the beer community. We are fortunate to have many wholesalers and retailers who do a terrific job managing beer quality; however, there is more work to do. We need to educate our brewery partners who are not yet draft savvy and then hold them accountable.
In this vein, the Brewers Association Technical Committee is currently working on a draft brewery maintenance manual that cover, but are not limited to keg, CO2, and contamination, and orphaned keg return paperwork. The manual is designed for wholesalers in the United States, and is titled DQS. Within DQS we are considering every parameter of draft quality as an area for improvement, including:

- Draft system cleaning standards
- Draft system design
- Keg cleaning, filling and handling (brewery related, exempt from the wholesaler and retailer manuals listed below)

The DQS committee has set out to clearly define the practices in draft system design and maintenance, as well as pouring the perfect pint of beer. We have developed a couple of manuals. One is specifically designed for wholesalers in states that allow them to manage the draft-cleaning program and for draft cleaning and install contractors in states that do not. This manual will be the more technical of the two because it is focused on the technical aspects of draft system design and the cleaning chemistry for draft line maintenance. A second technical manual, which is coming later this summer, will discuss the important issues surrounding design and maintenance and will provide guidelines for those interested in pouring and serving beer, as well as possible tips on server training.

The DQS group has also expanded beyond the Brewers Association and has support from all corners of the brewing industry. The partnership with these breweries, importers, and organizations is significant because it increases our efforts and allows for a better chance for a true paradigm shift in draft quality in the United States.

**Draft System Cleaning Standards**

I have had the opportunity to see the draft system maintenance requirements from some of the best draft breweries in America including Boulevard, New Belgium and Sierra Nevada, as well as our program at Upstream Brewing Company. (The three large breweries are sharing their programs as well; however, I have not seen the programs as of writing this article.) We all agree on one thing—the importance of cleaning draft lines every two weeks. This will help keep the biological load, beer stone, and other debris in check. From here, the programs are all similar in principle, but slightly different in procedure. The draft line cleaning standards the DQS group will define and cover include, but are not limited to:

- Approved cleaning chemicals and concentrations
- Contact time
- Cleaning frequency
- Temperature
- Cleaning methods, for instance pressure
- Specifics on cleaning faucets, keg couplers, foam detectors and other draft related equipment
- Record keeping

The DQS group is meeting regularly and debating the best cleaning program and language for each manual. I will list the areas that we all agree upon. As mentioned previously, lines and associated equipment should be cleaned every two weeks with an alkaline solution. The chemical composition should be at least 15 minutes, following the manufacturer’s recommendation for temperature and pressure. It is also beneficial to pre-wash with an alkaline solution on a regular interval. Cleaning with an electric pump is exceedingly superior to pressure pots. And a maintenance log must be kept and include cleaning details, as well as hardware maintenance and replacement.

**Draft System Design**

Draft system design in principle is quite easy. An ideal draft system includes ample cold keg storage, barrier tubing, stainless steel hardware and an appropriate inert gas blend for the beer being dispensed. Unless the keg is directly underneath the faucet, gas should be used within an insulated barrier tubing line. The system may be equipped with foam detectors and beer pumps for long draft lines.

It is my opinion that all draft systems should be designed by draft equipment manufacturers and/or draft experts, not the local HVAC contractor. The reality of the matter is that there are many poorly designed and/or old draft systems in the market. Problems include degraded tubing and insulation, no glycol cooling, brass fittings, inappropriate gas blends and/or inefficient compressors for beer dispense. Yes, I said air compressors for beer dispense. It is also a problem if an inappropriate gas blend is used. It has become relatively common practice for a high nitrogen blend (75 percent N2 / 25 percent CO2) used for serving nitrogenated stouts to be used for all beerg. Too much nitrogen in your blend will result in poorly carbonated beer (Henry’s Law makes clear that if the partial pressure of CO2 in the keg head space is lower than the equilibrium pressure of CO2 in the beer, CO2 will come out of solution.) It is unrealistic to expect all accounts to immediately install a new dispense system. However, if the DQS manuals can promote proper cleaning and correct gas blends, we believe it will be a good start.

Over time as new systems are installed and old systems are updated, we hope that our recommendations become standard guidelines.

**Keg Cleaning, Filling, and Handling**

The focus of cleaning, filling and handling kegs is currently outside the immediate scope of the manuals that the DQS group is developing.但我们相信，将会有长期的和长期的利益来从这个项目中受益。The New Brewer

- It is important to audit your keg cleaning procedures. I recommend doing spot checks at an interval that reflects your production volume. Fill the spot check keg with a sterile saline solution and plate the solution on microbiological media that specifically check for production yeast as well as wild yeast and bacteria. Then remove the keg spear and do a visual inspection for debris and beer stone.

- Cleaning the fill kegs is next. Kegs must be filled with cold beer from the bottom up. The CO2 volumes must be bar clean. Running a keg is no different than running a brewery: sanitation, sanitation, sanitation.

**Moving Forward**

The DQS committee faces many real challenges to move forward with the project. Many retailer attitudes surrounding regular cleaning only see the lost beer revenue. This is a narrow view. The DQS committee believes that just educating retailers to clean kegs and related equipment is not enough; we must educate them. Higher draft quality will result in higher volume beer sales, something that benefits everyone.

As we move forward with this education process we are fortunate and proud to be supported by many of the big players in the brewing industry. With this level of support, we truly believe that we can make a positive and lasting impact on draft beer quality.

It is our goal to put together guidelines that are easy to understand and to put into practice for all wholesalers and retailers. Furthermore, we hope that all new and rebuilt draft systems will be constructed in a manner that best suits beer quality. We believe that there will be both immediate and long-term benefits from this project. The DQS committee believes that, generally speaking, there will be a continued support of everyone involved in brewing, distributing and retailing beer, and that draft beer quality becomes a point of excellence in the U.S.