

The payoff of selecting original manufactured equipment versus knockoff equipment

When it comes to selecting wastewater equipment, it simply does not pay to cut corners and select inferior knockoff equipment. **Brian J. Cohen** of Aeration Industries International, Inc. reveals why

“Imitation is the greatest form of flattery” is an expression which can be used to summarise one of many central themes taught for hundreds of years by Confucian scholars to eager students in the ‘central kingdom’ of China and beyond. These values embraced the diligent study, duplication and recital of key ideas and passages passed down from one generation to the next. For many foreign companies selling their products to the Asia-Pacific region today, it is evident that this long time belief system often times clashes with the modern business world’s definition of Intellectual Property Rights (IPR). And when a company’s IPR has been violated, the word ‘flattery’ in this famous expression suggests another f-word: ‘frustration’.

However, the greater problem does not lie with those companies whose products are being ‘copied’ and thus losing valuable potential sales revenue. The real loser here is the tax paying public whose funding goes into projects where ultimately ‘knockoff’ equipment is being used. For the wastewater industry, the selection of an inferior knockoff product typically causes numerous problems beyond violating a company’s IPR. These problems include: reduced lifespan of equipment, poor operating performance which does not meet application expectations, high cost of ownership, overall negative perceptions of the technology and misapplication of products.

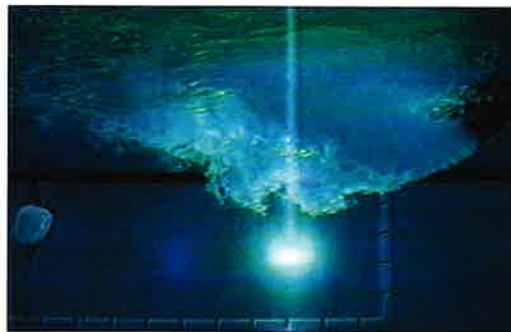
Reduced lifespan of equipment

To the company who has developed or pioneered their equipment, quality is of the utmost importance. These companies know the ‘black box’ of the machinery that will not only provide optimum performance, but also long term durability and minimal maintenance. Some of these designs and parts may look simple and easy to copy, but in reality they are often the result of a considerable capital investment and numerous years of R&D. The knockoff product from the surface may appear to be the same but in most cases they lack the important understanding or investment in developing these key ‘black box’ parts. As a result, these knockoff goods feature subtle but major internal differences that dramatically reduce the equipment’s lifetime. Excessive vibration,

continual wear of parts, and frequent breakdowns are common occurrences, which usually spell disaster for their copied products.

Poor operating performance

Due to the knockoff manufacturer’s lack of understanding of the ‘black box’ portion of the equipment, the copied machinery will not perform close to the performance level of the original product. For example, the product our company provides to the wastewater industry is aeration equipment. In the case of aerators, projects are sized based upon the aerators’ ability to oxygenate, known as Standard Aeration Efficiency (SAE). Each of our products is independently tested to achieve a certain SAE that is then applied to the design of the wastewater treatment plant. The many knockoffs of our



A 2-hp
Aspirator
copycat
below the
surface



A 2-hp
AIRE-O2
Aerator
below the
surface

aerator use the same universally accepted SAE values for our product/technology, however when we test their equipment in our corporate test pool, its SAE may only be 65 per cent of what our equipment's actual performance is. When a tender is opened for a product which is properly sized by consulting engineers at the 'original' products test values, the knockoff companies will offer their equipment as an 'equal' using fictitious test data. Obviously knockoff equipment suppliers drive prices down significantly in the bid by using inferior parts as described above. But perhaps not so apparent is that they end up deceiving the industry by offering a product that can only handle a portion of the treatment/serviceability that is required for the project. In the example of our aerators where the knockoffs are only capable of supplying 65 per cent of the oxygen that is required for the project, the treatment plant in the end could become severely crippled and potentially septic. Unfortunately, many times these companies get away with their inferior performance as plant designs have safety factors in their calculations which can mask their inefficiencies. Also, these plants generally are sized for future flow rates or loadings 10 to 20 years down the road and therefore these shortcomings would not be exposed until many years later. Lastly and perhaps saddest of all, is that very simply put, the plants are not being monitored properly, therefore nobody truly notices the outright failure of the knockoff equipment. The common thread with all of these cases is that it is the customer and/or tax payer who is not getting what they paid for due to the knockoff equipment's performance.

High cost of ownership

As eluded to above, the long-term expenditure that a wastewater treatment plant will endure becomes extremely expensive for those choosing to select knockoff equipment. Original equipment is designed to operate with very little maintenance and few parts replacement for extended periods of time. Typical knockoff equipment is lucky if it ever reaches a five-year lifetime. Although the knockoff equipment may be as little as 50 per cent the cost of the original product and attractive to the customer/contractor during the bidding process, when you factor in its failure ratio, frequent parts failures and its inability to perform, the decision is quite easy. This high cost of operation endured by selecting the knockoffs ends up causing the client to pay sometimes over double the amount in operation expenditures over a 10-year period of time. I have visited too many plants where the client had to remove its inferior equipment after only a couple of years of operation due to either a performance failure or catastrophic equipment malfunction. Their decision to choose the cheapest knockoff to save a small portion of investment ended up creating numerous headaches and costing them (and the public taxpayers) a heap of cash.

Negative perceptions of technology

When a knockoff product does fail, to the persons involved in the frustrating experience, it equals a 'technology' failure. Even though the appropriate technology may have been

specified on a project, the failure of a knockoff on only one project can leave a bitter taste in the mouths of the many involved in the project. This group includes: consulting engineers, designers, end users, government officials, and contractors. Word may even spread to the classes and textbooks taught by professors at the university level about the perceived failure of a certain technology. The result of this bad taste is that the 'technology' itself may never be used again for projects in a particular country or region that may have had a bad experience with the knockoffs. And this often leads to the application of a different and/or perhaps inferior technology on future projects, which may be unproven or unsuited for that particular application.

Misapplication of products

The president of our company often tells potential customers that with our over 30 years in the business, we not only know where to sell our equipment, but more importantly we know where not to sell our equipment. The experience of applying your original equipment in the industry is invaluable and perhaps the number one reason to select an original equipment supplier. The knockoff companies are often only after the quick sale and not as interested in the actual application itself. They typically have not been in the business of manufacturing their product too long and furthermore may not be in operation for the long run. The core problem is these companies lack the engineering, staff, experience, and process expertise to apply their inferior equipment. The resulting misapplication of equipment typically leads to eminent failure, which in the end causes another 'black eye' for the technology as a whole.

Conclusion

When it comes to selecting wastewater equipment, it simply does not pay to cut corners and select inferior knockoff equipment. There are far too many factors that in the end make original manufactured equipment the right selection in terms of equipment dependability, cost of ownership and product performance. The next time you face an important purchasing decision, please bear in mind that the numerous drawbacks of selecting inferior knockoff equipment greatly outweigh its lone significant benefit of an attractive price. Once our industry realises the importance of this lesson, a lot more money will be saved and far less headaches will occur.

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