

KIBART CHRONICLE

Kibart Chronicle
May 30, 2006

KIBART TURNS 20



In March of 1986, the dreams of Pat Barthelme and Jim Kitko to own their own engineering firm became reality with the official opening of Kibart, Inc. For those who didn't know, the "Ki" comes from Mr. Kitko's last name and the "Bart" comes from Mr. Barthelme's last name.



The office was originally located in a small annex portion of the old Towson Town Centre. That space was quite small and not nearly as nice as the space that we currently occupy at Dulaney Center II. When the Towson Town Centre was renovated and expanded, the Kibart office was demolished, and Nordstrom's was constructed in its place. The developer of the Towson Mall project was also building the Sheraton Hotel/Dulaney Center complex, so Kibart negotiated a lease for office space here at Dulaney Center II. We are by far the longest standing tenant at Dulaney Center, having been here since its doors first opened.



Over the twenty years, Kibart has gone from a small 4 person engineering firm to a well recognized and accomplished 30 person outfit. We still employ one of the original staff members, Mr. Joseph Del Pilar. Congratulations Joe for putting up with us for so many years. Although, both Jim and Pat have now both retired from Kibart, we want to thank them for their vision and their entrepreneurial spirit. Without them Kibart would still be a dream.

The engineering process has been completely transformed in the past twenty years. It's hard to imagine that when Kibart first opened, none of the technical staff needed a computer or even knew how to use one.

All drafting was done by hand on drafting boards, which was more art than science. Fax machines had just been invented. Load calculations were done mostly by hand. The company owned one computer, used for typing only. There were no computer networks for our size and type business, and there was no email or internet. Equipment selections were made from a catalog, with minimal input from sales reps. The first Cadd machines were seldom used; mostly for details and schedules. We first had 2 Cadd machines for the entire staff, and they were located in a single office for access by everyone. The first computer not used for typing was put on rollers, so it could be rolled to someone who needed it.

Although Kibart has changed with the times, our mission remains the same. We aspire to provide quality engineering service to our clients, and we always remember that we are still a young firm, here to serve our clients. All 4 of the current owners (Ed, Dave, Farshad, and Mike) have each been with the firm for at least 14 years and are committed to insuring that the firm remains in operation for the next 20 years and beyond. All of our employees do an excellent job, and we appreciate their hard work. We are confident that the Kibart family will continue to prosper professionally long into the future.



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KIBART, INC.

*MAKING
CONCEPTS
REALITY*

20th ANNIVERSARY PARTY



On April 8, 2006, Kibart celebrated its 20th Anniversary by throwing itself a grand party at the Engineer's Club in the Historic Mt. Vernon District of Baltimore. Everyone appeared to thoroughly enjoy themselves. The atmosphere of the Club is absolutely wonderful and was a perfect place for such a joyous occasion. We received many compliments from clients, employees, and spouses. As usual, the food at the Engineer's club was outstanding. Mike Ford did an excellent job with the food and drink selection. Kathy Liberatore and Toni Watson should also be thanked for their hard work with other arrangements such as the party gifts, poster boards, name tags, invitations, etc.

Too bad Mr. Erhlich (the Gov) was too busy with last minute BGE legislation to make the event. We'll save his name tag for our 25th Anniversary Party.



1986 Trivia

Median Household Income: \$24,897
Average Price Gallon of Gasoline: \$.93
Minimum Wage: \$3.35
U.S. Postage Stamp: \$.22
Record of the Year: We are the World
Movies: Platoon, Aliens, Pretty in Pink
Television: Fox Television Network introduced
History: Space Shuttle Challenger Disaster





TECH KORNER

Pump and Fan Affinity Laws: The following highlights some of Ed's class on the Affinity Laws:

We can use the Affinity Laws to calculate flow, rpm, system pressure and break horsepower. These laws are as follows:

$$\frac{Q_2}{Q_1} = \frac{n_2}{n_1}$$

$$\frac{p_2}{p_1} = \left[\frac{n_2}{n_1} \right]^2 = \left[\frac{Q_2}{Q_1} \right]^2$$

$$\frac{bhp_2}{bhp_1} = \left[\frac{n_2}{n_1} \right]^3 = \left[\frac{Q_2}{Q_1} \right]^3$$

$$\frac{Q_2}{Q_1} = \sqrt{\frac{p_2}{p_1}} = Q_2 = Q_1 \sqrt{\frac{p_2}{p_1}}$$

$$p_2 = p_1 \left[\frac{Q_2}{Q_1} \right]^2$$

When: Q = flow (cfm or gpm)
n = rpm
p = Pressure (ft head, psig, "w.c., etc.)
bhp = break horsepower

Example of Lack of Air Flow Problem:

You have selected a fan for 5,000 CFM and 2" static pressure, and the system was balanced for 4,000 cfm and 2" static pressure. The fan motor is at maximum shieve settings.

You think, well I only have 2" static pressure, so why don't I have 5,000 CFM. Something must be wrong with the fan, right?

Wrong, the actual static pressure at your design air flow of 5,000 CFM is much higher then calculated.

You need to find out what that static pressure really is when flowing 5,000 cfm. You know the system is delivering 4,000 CFM @ 2" static pressure. You don't know what the static pressure is at 5,000 CFM. Therefore; use the fan affinity laws to calculate actual static pressure at 5,000 cfm.

p₁ = 2" wc
Q₁ = 4,000 CFM
Q₂ = 5,000 CFM
p₂ - ?

Solve for p₂:

$$p_2 = p_1 \left[\frac{Q_2}{Q_1} \right]^2$$

$$p_2 = 2 \times \left[\frac{5000}{4000} \right]^2 = 3.125" \text{ wc}$$

Note: The static pressure increases to the square of the flow, not linearly. Even though you are only 20% short on flow, you are 56% short on static pressure. Horsepower is even worse, because it increases by the cube. You will need to determine why the static pressure is 56% higher then calculated. You may have to select the fan, new fan motor, etc.

UPCOMING ACTIVITIES

Holidays:

May 29th: Memorial Day Observance
Kibart Offices Closed

July 4th: Independence Day
Kibart Offices Closed

Events:

June 23rd: Kibart Bowling Party, Timonium Fair Lanes, 3 duckpin or tenpin bowling games, shoe rental, pizza, drinks

TDB: Kibart Family Picnic



Seminars/Training:

- April 19th: Advantages of Spiral Ductwork, presented by Mohamad Jamal of Kibart.
- May 9th: Joe Del Pilar attended the Carrier Software System Network, HAP Basic Program v4.1 Training in Philadelphia
- May 11th: Dave Williams attended the Carrier Software System Network, Block Load Training in Philadelphia
- May 21st, 22nd, and 23rd: Ed Abbott and Mike Ford attended the Association of School Business Officials 54th Annual Spring Conference held in Ocean City, Maryland
- June 14th, Mike Ford and Steve Brzezinski will represent Kibart at the Building Congress & Exchange Construction Estimating Academy where one of the subjects will be Estimating for LEED Projects.
- June 7th: Johnson Controls, presents web-based system plus York acquisition.
- June 22nd: Warren Lightning Rod Company presents Lightning Protection Systems Seminar.
- June/July: Commissioning Building Systems, presented by Ed Abbott.





WELCOME ADDITION

Kibart is pleased to announce the addition of three new employees to the Kibart team:

Matthew Obenchain, Mechanical Engineer
Bachelor of Science from Penn State University

Douglas Howle, Jr., Mechanical Design Engineer
University of Maryland Baltimore Graduate, December 2006

Udit Patel, Mechanical Design Engineer
Bachelor of Science from University of Maryland Baltimore

Matthew and Udit will be joining Abbas Lohrasbi, while Douglas Howle will be a welcome addition to Farshad Kas-siri's team. We look forward to working with our new associates and welcoming them to our team.

MIKE'S FIELD NOTES

Did you know?

- Kibart's marketing of our commissioning services is paying off. We have been awarded several commissioning projects over the last few months and have a few new ones we are also working on.
- We have updated many of the Construction Administration Forms. Please make sure that you have the current forms for site visits, testing and verification, punch lists, etc.
- Copper and Steel prices are being set by commodities trading. In some cases the prices quoted to Contractors on bid day are only held for a week.
- Our new computer server "REG II" is up and running. The final hard drive change over is scheduled for June 3rd. Thanks to Dave Williams for all of his hard work on this upgrade. Dave updated all of our computer software and e-mail accounts. He also coordinated and implemented the installation of a new internet provider. The only thing that anybody noticed over the last several weeks is that our internet service is "Not" down anymore and that e-mails are much faster.
Good Job Dave!

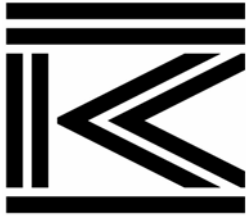


Who would have guessed?

- Some public projects are being shelved because of a lack of bidders. There appears to be more construction work on the street than there are contractors.

This month's thought:

- Strive to gain knowledge to answer a question and for the ability to let someone else say it first.



*K*ibart's mission is to provide quality professional engineering services with a commitment to client service and response time, producing economical, energy efficient, and user friendly designs, delivered on time and within budget.

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We're on the web!
Kibart.com

ANNOUNCEMENTS

Great Job Wsam! The Baltimore Chapter of the American Society of Heating, Refrigeration and Air Conditioning Engineers awarded Wsam Gazi a scholarship for studies in the field of engineering at the University of Maryland Baltimore County. **Way to go Wsam!**

BIRTHDAYS

- January 1: Steve Brzezinski
- January 10: Dave Fuller
- January 21: Christina Gedeon
- February 19: Toni Watson
- March 16: Joe Del Pilar
- April 27: Farshad Kassiri
- May 22: Chris Pettman



KIBART ANNIVERSARIES

- | | |
|-------------------|----------|
| Joe Del Pilar | 20 years |
| Mike Ford | 14 years |
| Dave Fuller | 14 years |
| Harvey Wofford | 9 years |
| Kevin Cullison | 6 years |
| Christina Gedeon | 6 years |
| Dave Williams | 6 years |
| John McClain | 5 years |
| Toni Watson | 5 years |
| Steve Brzezinski | 2 years |
| Christine Pettman | 2 years |
| Willie San Juan | 2 years |
| Karl Gumnick | 1 year |

KIBART FAMILY NEWS

Congratulations to John and Joan McClain's daughter, Jamisse Danielle. Jamisse will graduate from Towson Catholic High School having earned national academic awards. She excelled at basketball and volleyball including an undefeated championship season. Jamisse will be attending Temple University, School of Communications, pursuing a career in Advertising.



Dave Fuller's son, Matt is working on his Eagle Scout Project with the local fire department. Matt's project involves field surveys and use of satellite imagery to collect data on approximately 50 ponds used for emergency water sources. Meanwhile, Sarah Fuller (Dave's daughter) is continuing her dance/acting hobby with an appearance as an extra in two upcoming movies filming in New York; Spiderman 3 and Music & Lyrics.