NATURAL GAS AS AN INTERNAL COMBUSTION ENGINE FUEL

Coffee Talk
STEREOLITHOGRAPHY TECHNOLOGY

See the “Investment News” Month #3
What is an “Asset Allocation” Fund?
The SAE Rep - A Key Section Resource

Any SAE Section - but especially a large and widespread Section such as Chicago and Michiana - needs the grassroots support of its members, through a network of representatives (we call them reps) at each work site where there are several SAE members. Without this rep system, our Section would be hopelessly out of touch with the large membership.

If you see at your workplace information about the upcoming SAE meeting, and if this information is one or two weeks earlier than the arrival of the SAE newsletter in your mail - then your worksite has a good SAE rep. If this information is visibly posted and highlighted so that you cannot miss it - you may even have an excellent SAE rep!

What actually should a rep do? In few words, reps maintain the SAE presence at the work site, they facilitate the two-way communication between members and the Section Board, they stimulate and support SAE activities such as membership drives, etc. One of the most noticeable of their activities is the early posting of technical meeting information.

Who serves as SAE reps? They usually are enthusiastic individuals who enjoy leadership positions in their organizations or who want to sharpen their leadership skills! They like working with people and they enjoy networking with like minded individuals. After a few years of working as a new company rep and knowing SAE better, they may want to assume responsibility for a Section office.

Through the years, the Chicago Section has been able to establish a good reps network in larger organizations. An updated list is included in this newsletter. But Steve Burdette's goal is to have a rep at each location where there are five or more SAE members. (Steve Burdette is the Rep Network Chairman. His phone at J.I. Case is (708) 887-3736.) If you are the enthusiastic individual I was talking about and want to be the rep for your group, let Steve know! He is eagerly trying to reach out to as many as possible.

If you plan to attend our November meeting, please do not forget to secure your dinner reservation before the deadline.

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As experts in metal tube forming technology, we can engineer solutions effectively and efficiently. The extreme demands of automotive applications (e.g., severe temperature, corrosive elements, noise, and vibration), present unique challenges for the production of engine manifolds, EGR system piping, cross-over tubes, and exhaust pipes. An engineered-design approach to product development allows Senior Flexonics to meet these challenges head-on.

Flexible automotive components are developed with specific applications in mind, whether we are engineering a part for a new system or solving a problem in an existing system. Our design engineers fully examine a product's performance prior to and during prototype development through computer analysis, using finite element analysis, modal testing, stress analysis, fatigue analysis.

Our extensive testing facilities permit us to simulate actual road conditions, exposing prototypes to corrosion, vibration, acoustical and mechanical extremes. This capability is especially important for new vehicle systems still in the design phase. We can also accelerate this process without having to wait for time-consuming field testing, therefore reducing the overall time frame required for product development, enabling us to meet tight customer deadlines--cost efficiently.
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Prototype Express has grown to be the largest provider of stereolithography-based prototyping services and has built a strong reputation for providing quality services.

In December 1993 Prototype Express moved to a new facility, more than double the size of its previous quarters. Shortly thereafter they increased their installed base of Stereolithography systems to five with the addition of two SLA-250s and an SLA-500, giving them the largest stereolithography capacity of any independent service bureau.

In addition to Stereolithography services, Prototype Express provides Solid Modelling CAD services using Pro/ENGINEER. Shop services include silicone rubber and epoxy mold making and part casting in polyurethane and silicone.
Ricardo North America (RNA) is a wholly-owned subsidiary of the international consulting firm Ricardo Consulting Engineers. RNA has two locations: the Chicago Technical Center (CTC) located in a 22,000 sq. ft. purpose built facility in Burr Ridge, Illinois, and the Detroit Automotive Engineering Center (DAEC) located in Novi, Michigan. The Chicago Technical Center provides value added powertrain design and development and CAE services locally to our U.S. clients in the powertrain industry. Our Detroit Automotive Engineering Center is a fully operational engineering office focused towards serving the unique needs of the Detroit automotive marketplace.

At the Chicago Technical Center, there are currently over 50 staff, with plans to grow to 65 staff by next year, representing an extensive level of U.S.-based Ricardo expertise and skills. At CTC, two high specification engine test cells are fully operational, executing advanced engineering programs for our clients.
NATURAL GAS AS AN INTERNAL COMBUSTION ENGINE FUEL: CURRENT TRENDS AND FUTURE STATUS

by
Graham Weller

Natural gas is currently receiving a great deal of attention as the most viable of the alternative fuels being considered for road vehicles. This activity should not, however, obscure the fact that using natural gas as an engine fuel is neither a recent phenomenon nor is its use confined to mobile applications. There continues to be a significant and growing market for natural gas engines in power generation, pumping and cogeneration applications. The talk will review the current status of natural gas engines in a number of market sectors and geographic locations and will consider how gas engine technology has evolved over the last few years. The main issues currently being addressed by workers in this field will be discussed and finally conclusions about the future role of natural gas as an engine fuel will be drawn.

Graham Weller joined Ricardo Consulting Engineers in 1982 after graduating from the University of Leeds with a B.Sc in Mechanical Engineering. Having spent time in the computing and noise departments, Graham joined the heavy duty diesel department working on the development of truck diesel engines for performance and emissions. In 1987 Graham left Ricardo to join the research division of British Gas to initially work on the development of gas engines for cogeneration applications and more recently on the NGV research program. Graham rejoined Ricardo in March 1994 to manage the gaseous fueled engines department. Graham is a member of the Institution of Mechanical Engineers and has also gained an MBA from the University of Warwick.

Dave Flynn is a founder of Express, a leading rapid prototyping company. He holds a BS in Chemical Engineering from the University of Illinois at Champaign-Urbana. Diane holds a BS in Chemical Engineering from the University of Illinois at Chicago.

MEETING
Talk

ITHOGRAPHY TECHNOLOGY

Y Flynn

a description of the

with emphasis on recent

several rapid prototyping

highlighting the use of

and partner at Prototype

prototyping service bureau,

ongoing operations. Dave

Stereolithography Users

Prototype Express, Dave

at Baxter Healthcare with

software development

When Baxter was selected

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aspects of the installation

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America. She is responsible

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for various marketing ac-

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6:00 P.M. Dinner
7:00 P.M. MEETING

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Q. What exactly is an “asset allocation” fund? I’ve heard a lot about this concept recently.

A. An asset allocation fund is a mutual fund with an investment style that seeks to balance three types of assets: stocks (for growth), bonds (for income), and money market instruments (for stability). The proportion of each type of asset in the fund at any given time depends upon the relative performance potential of a given type versus the others—and the amount of risk involved to achieve the desired return. In one sense, through diversification an asset allocation fund allows investors to “eat their cake and have it too.”

Currently, nearly $10 billion is invested in the asset allocation (balanced) mutual fund category. There are three good reasons:

1. A combination of stocks, bonds, and cash provides some counterbalance against a major market correction. In fact, even slight exposure to bonds and money market investments can lower a fund’s volatility and still provide a return nearly as attractive as an “unhedged” single asset fund.

2. Generally, an asset allocation fund has the flexibility to lower or raise exposure to stocks, bonds, or cash to any level desired, subject to any limitations in its prospectus. Single asset funds must maintain a minimum investment (usually 65%) in their targeted asset class, based on SEC rulings. In an asset allocation fund, the asset allocation decision is made for the shareholder, using the experience and resources of an extensive research effort. Moreover, while past performance is no guarantee of future results, the fund’s track record attests to the manager’s success rate in guiding allocation decisions.

3. While diversification among several mutual funds may be the optimal fund selection course for investors, an asset allocation fund is the obvious choice if an investment is limited to only one fund. Not only will an asset allocation fund provide access to multiple investments (stocks, bonds, and money markets), it will also provide a managed portfolio in which the shareholder may make subsequent investments, knowing that the dollars added are going to work in the most attractive investments available at that time (as determined by the portfolio manager). The fund, in essence, serves as the shareholder’s “investment advisor” with all of the conveniences of a mutual fund.

What to look for in an Asset Allocation Fund

Check the fund’s total return and volatility statistics.

Determine that the money manager has:

- Access to specialized analysts in each investment class
- An allocation strategy grounded in expert knowledge of the financial markets
- An asset allocation record that has performed well over time.

In short, a successful asset allocation fund’s investment philosophy should lead to both attractive returns and a less volatile net asset value. It should also provide the investor with the comfort of knowing that critical investment decisions—balancing risk against reward—are being made and implemented by investment professionals.
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1994-1995 SAE CHICAGO SECTION PROGRAMS
The annual Chicago Section SAE PLAY DAY golf outing was again a success. The weather was neither cold nor hot--just right for playing golf. Contrary to what the weathermen predicted, we did have a brief little shower in the morning, but it did not interrupt the game for long. We again had a photographer take pictures of each foursome and the photos were ready before the evening meal. Some of the golfers made quick use of the two door prizes given to each player. The golf towels were handy and a number of players filled the Coleman jugs at the beer holes. We came close to running out of beer.

Winners of the various events were very pleased with the trophies and quality of the prizes. Chicago Section Chair Rodica Baranescu, who pulled the winning ticket for the TV, received a hug from the happy winner.

The golf outing would not have been a success without the generous contributions of the following companies:

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