tivities like aerobics, dance etc., would prevent or reduce risk of disease due to stress in IT people which in turn will produce a healthy community. To manage stress these people need to play sport, have a hobby or just have a good holiday. Stress score helps us to screen who would be prone to stress related physical illness and people with a score more than 300 are at risk of illness and care should be taken at the earliest to relive their stress. Healthy employees mean better performance by employee that in turn produce a healthy community. Annual stress scoring has to be done, and employees are having a score more than 300 should be involved in active antistress management.

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PRODUCTION OF SYNTHETIC DIAMONDS IN THE REPUBLIC OF BELARUS

A synthetic diamond is a diamond produced by a controlled process, as contrasted with a natural diamond created by geological processes.

The properties of synthetic diamond depend on the details of the manufacturing processes. However, some synthetic diamonds have properties such as hardness, thermal conductivity and electron mobility that are superior to those of most naturally formed diamonds [1].

After the 1797 discovery that diamond was pure carbon, many attempts were made to convert various forms of carbon into diamond. The earliest successes were reported by James Ballantyne Hannay in 1879 and by Ferdinand Frederic Henri in 1893.

In 1954 General Electric company achieved the first commercially successful synthesis of diamond. The largest diamond they produced was 0.15 mm across. It was too small and visually imperfect for jewelry, but usable in industrial needs [2].

As for the former USSR, the researches in this sphere gain great results only in mid 1980's. Scientists from Novosibirsk Deryagin and Fedoseev succeeded in making diamonds using High Pressure and High Temperature technology. This technology includes three main press designs used to supply the pressure and temperature necessary to produce synthetic diamond: the belt press, the cubic press and the split-sphere (BARS) press.

In the Republic of Belarus the first enterprise growing synthetic diamonds was «Adamas Invest». It was a closed enterprise, outside people were not allowed to visit it. «Adamas Invest » was created in 1990's in

Atolino, not far from Minsk. It is considered to be a high technological plant. The use of the latest scientific achievements made its production highly competitive and perspective in various branches of mechanical engineering, electronics and medicine.

Monocrystals of diamond produced by «Adamas Invest» have, as rule, the following colors: fancy yellow, fancy yellowish-brown, fancy orange-brownish. The collection of these colors is extremely rare in nature.

The diamonds are made by High Pressure and High Temperature technology developed on the "BARS" apparatus.Only five companies in the world apply similar technology. "BARS" is the abriviation used for the special tools for producing diamonds.The «BARS» apparatus is to be the most compact, efficient, and economical of all the diamond-producing presses.

In the center of a «BARS» device, there is a ceramic cylindrical "synthesis capsule". The cell is placed into a cube of pressure-transmitting material, which is pressed by inner anvils. The outer octahedral cavity is pressed by eight steel outer anvils. After mounting, the whole assembly is locked in a disc-type barrel with a diameter about one meter. The barrel is filled with oil, which pressurizes upon heating, and the oil pressure is transferred to the central cell. The synthesis capsule is heated up by a coaxial graphite heater, and the temperature is measured with a thermocouple. Gems are growing under the following conditions: pressure rises up to 55kbar, temperature rise up to 2000 C [3].

There are 120 devices of synthesis at the enterprise. These apparatus can synthesize up to 1200 carat per month. Only 220 diamonds are of the high grade quality. The Republic of Belarus takes the leading place in the world using the BARS apparatus in the production of diamonds.

Belarusian diamonds are well known around the world. These gems are exported to Asian and European countries, and to the USA and India also. As for the home market they can be found in every jewelry store of Minsk and other regions of our Republic.

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