Read: 1.Application dt.16.05.2013 by M/s. Abrasive Technology, holding TIN 27220007296V.
2.Application dt.15.05.2013 by M/s. Star Diamond Tools Pvt. Ltd., holding TIN 27130663017V.

Heard: Sh. C. B. Thakar (Advocate) attended in both the cases alongwith Sh. Hemant Shah (Partner in M/s. Abrasive Technology) and Sh. Girish Zaveri (Managing Director in M/s. Star Diamond Tools Pvt. Ltd.)

PROCEEDINGS

(under section 56 (1) (e) of the Maharashtra Value Added Tax Act, 2002)

No.DDQ/11-2013/Adm.6/33-34/B - 2 **Mumbai, dt.** 14/08/2015

This is a set of two applications involving a claim to a common schedule entry under the Maharashtra Value Added Tax Act, 2002 (MVAT Act,2002). Hence, a common order is decided to be passed in the matter. The details of the questions are as follows :

Name & Address	Bill No. & Dt.	Product
M/s. Abrasive Technology 123, Shivkrupa Ind. Estate, L. B. S Marg, Vikhroli (West), Mumbai - 400 083	HC/13-14/000097 dt.20.05.2013	"Diamond / CBN Grinding Wheels"
M/s. Star Diamond Tools Pvt. Ltd. 9/10/12, Ujagar Indl. Estate, W. T. Patil Marg, Deonar, Mumbai-400088	0127/13-14 dt.06.05.2013	"Diamond Dresser"

02. FACTS OF THE CASE

The submission as made in the applications is reproduced thus :

M/S. ABRASIVE TECHNOLOGY

"The applicant is a firm, manufacturing various diamond industrial tools also referred as "Diamond Grinding Wheels/Tools (Industrial goods and Tools made of Diamond)". These are tools made of natural industrial diamonds. The main features of various diamond industrial tools can be stated as under.

A) Main Characteristics :
1) This is a Tool with the aid of machine, can grind / machine hard materials
2) This can not be used without any machine
3) This is primarily made of Diamond Powder as very hard Abrasive in abrasive machining process.

B) Raw materials :
1) Synthetic Industrial Diamond Powder/Natural Industrial Diamond Powder
2) Binders like, Resin, Metal, vitrified (Glass), Electroplating (Nickel)
3) Filler materials

C) Manufacturing process:
1) Diamond Powder along with Binder & Filler materials are homogeneously mixed
2) The above mixture is then bonded either by hot press or by sintering process
3) The Bonded ring is then mounted on Aluminum / other material core.
4) Single layer of Diamond is electroplated on steel core.
5) Finish machining above to final shape.

D) Costing of Diamond in overall cost : Approx. more than 60%

E) Use / Application : To Grind / machine hard materials like :
1) Diamonds
2) 20 Semi precious stones
3) Ceramic materials
4) Tungsten Carbide materials
5) Quartz materials
6) Glass materials
7) Other Non ferrous hard materials.

F) How Diamond is crucial in above products :
Because of High hardness of Diamond it is the primary material doing machining by Abrasive machining process.

G) Our catalogue: Please visit our website www.abtechindia.com

H) HSN Chapter heading No. : 6804229003

I) BIS / ISO / American Standards : IS 3264 / ISO 6168 / ANSI B74.3 respectively

Recently the Government has introduced new entry for diamond tools. The said entry is reproduced below i.e. entry C-53A.

"53A Industrial goods and tools made of Diamond, Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium, and alloys thereof, if any. 5%

We submit that our above items are covered by above entry C-53A. The diamond is main ingredient of the tools and therefore, they are diamond tools. Though the diamond is fixed in steel handle or body made of other material etc., for handling and use purpose, the functioning of tool is based on diamond. In other words, the tool is used because of diamond which performs the real function of the tool.

In light of above our submission is that our above items are covered by entry C-53A, liable to tax @ 5%.

At present in absence of statutory guidance, we are charging 12.5% tax, but our buyers are objecting. Therefore, we are filing this application for statutory determination of rate of tax.

We herewith enclose our invoice bearing No. HC-13/14/000038 DT.16.4.2013.

We request to determine rate of tax in respect of each item in the said invoice."

M/S. STAR DIAMOND TOOLS PVT. LTD.

"The applicant is a Company, manufacturing various diamond industrial tools also referred as "Diamond Dressing Tools". These are tools made of natural industrial diamonds. The main features of various diamond industrial tools can be stated as under.

Main characteristics :

1) This is a Tool with the aid of machines, can dress/shape the grinding wheels of Grinding machines/
2) This cannot be used without any machine
3) This is primarily made of Industrial Diamond as exceedingly hard and Abrasive resistance material in dressing & machining process.

Raw materials :

1) Natural Industrial Diamonds
2) Metal/Matrix Powder viz Sponge iron/Tungsten/Copper Alloys
3) Brazing Filler materials
4) Graphite moulds and rods
5) Bright Bars/M S Shanks

Manufacturing process :

1) Appropriate/Suitable quality/size of Industrial diamonds are set on carbon/graphite pellets
2) M.S. Shanks are cut as per required size
3) Diamonds are sintered in metal shank on Induction Machine with the help of Matrix Powder
4) Rough machining done on Steel Shank
5) Semi finish grinding/Finish grinding
6) Inspection
7) Final finishing of Tool
8) Marking/Stamping

Costing of Diamond in overall cost : Approx. more than 60%

Use / Application : To Dress/Shape Hard & Abrasive Material

1) Alluminium Oxide
2) Silicone Carbide
3) Seeded Gels

How Diamond is crucial in above products :

As Natural Industrial Diamond is the hardest and the most abrasive resistant material it is the choice primary choice for doing dressing/shaping/cutting/machining of all kind of abrasives materials indicated above

Abrasive machining process.

HSN Chapter heading No. : 8207 9090

Recently the Government has introduced new entry for diamond tools. The said entry is reproduced below i.e. entry C-53A.

53A	Industrial goods and tools made of Diamond, Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium, and alloys thereof, if any.	5%

We submit that our above items are covered by above entry C-53A. The diamond is main ingredient of the tools and therefore, they are diamond tools. Though the diamond is fixed in steel handle or body

made of other material etc., for handling and use purpose, the functioning of tool is based on diamond. In other words, the tool is used because of diamond which performs the real function of the tool.

Our catalogue is available on website www.stardia.com.

In light of above our submission is that our above items are covered by entry C-53A, liable to tax @ 5%.

At present in absence of statutory guidance, we are charging 12.5% tax, but our buyers are objecting. Therefore, we are filing this application for statutory determination of rate of tax.

We herewith enclose our invoice bearing No. 0127/13-14, dt.06.05.2013.

We request to determine rate of tax in respect of each item in the said invoice."

03. HEARING

The cases were taken up for hearing on dt.01.10.2014 when Sh. C. B. Thakar (Advocate) attended in both the cases alongwith Sh. Hemant Shah (Partner in M/s. Abrasive Technology). An adjournment was sought in M/s. Star Diamond Tools Pvt. Ltd. whereas in M/s. Abrasive Technology, it was submitted thus :

M/S. ABRASIVE TECHNOLOGY

- The product for determination is 'Diamond grinding wheel' and the 5 products mentioned in the bill no.HC/13-14/000097 dt.20.05.2013 are 'grinding wheels' differing in shape and size.
- The product is a 'diamond grinding wheel' which is to be mounted on a grinding machine which rotates at high speed. The 'job' is held in a fixture and the fixture moves on a slide on the machine. The 'job' moves towards the grinding wheel and with the abrasive machining process the 'job' is shaped or finished.
- The applicant has collected tax @ 12.5% on the sales of the impugned product. However, buyers are objecting to the same. It is contended that the product is covered by the schedule entry C-53A for Industrial tools made of diamond, gold, etc.
- The applicant was enquired whether the product could be used to shape or finish the 'job' without being mounted on a machine. To this it was informed that the product cannot be used without being mounted on a machine.
- It is contended that the impugned product is known in the market as a 'tool' and could also be otherwise covered by the words 'Industrial goods' used for the purpose of the aforesaid entry.
- The applicant was enquired about the cost of the diamond in the impugned product. It was submitted that the diamond cost constitutes more than 60% of the total cost of the product and not the selling cost.
- The applicant was enquired as to whether the impugned product is 'made to specification'. It was submitted that the products are manufactured as per the requirements of the customers in terms of finishing and material removal rate. The products are also available as per the catalogue.
- It was enquired whether there are tools which are entirely made of diamond, gold, silver, platinum, Osmium, Palladium, Rhodium, Ruthenium. It was replied that there are platinum tools which are entirely made of platinum and are mainly used in chemical processes e.g. for gravitational analysis in chemistry. The present product is made of items such as aluminum, resin binder, metallic and abrasive fillers along with diamonds in granular powder form.
- It is submitted that the product is an industrial tool made of diamond.

A hearing was again scheduled on dt.24.06.2015 when Sh. C. B. Thakar (Advocate) attended in both the cases alongwith Sh. Hemant Shah (Partner in M/s. Abrasive Technology) and Sh. Girish Zaveri (Managing Director in M/s. Star Diamond Tools Pvt. Ltd.). The proceedings during hearing are thus :

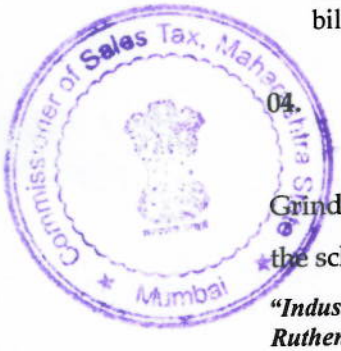
M/S. ABRASIVE TECHNOLOGY

- The submission as made earlier was reiterated.
- It was stated that the tools can be made with natural or synthetic diamond powder. However, synthetic diamond powder is used for uniform properties/requirements.

- The product put up for determination is of synthetic diamond powder.
- It was stated that in the entry 53A, there is no mention about the nature/origin of the diamonds.
- The applicant submitted that the raw material which is synthetic industrial diamond powder is imported. Purchase invoices dt.23.10.2014 and dt.22.04.2015 showing purchase of 'synthetic industrial diamond powder' from U.S.A and Korea, respectively under Tariff 71050000 are submitted.

M/S. STAR DIAMOND TOOLS PVT. LTD.

- The product for determination is called 'Diamond Dresser' (Diamond Tool). It is used to shape grinding wheels. It is mounted on a grinding machine which holds the diamond dresser and the same dresses/shapes the grinding wheel which is mounted on the grinding machine. It cannot be used without being mounted on the grinding machine.
- It consists of natural rough diamonds, metal powder is the binder and this is mounted on a mild steel shank.
- Since the application states at two places that the impugned product is primarily made of Industrial diamonds, it was queried as to whether the diamond is natural or synthetic. To this, it was submitted that the raw material is natural diamond only whichever is not classified as 'Gem diamond' and are mined diamonds only.
- It is claimed that the product would be covered under entry 53A which covers 'industrial goods and tools made of Diamond, Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium" as the present product is an industrial tool made of diamond.
- In the total cost of the tool, the cost of diamond is more than 60%.
- The product is custom-made as per specifications of the customers depending on the machine and the requirements and where standard products as available with the applicant suit the requirements of the customer then they are provided.
- It was stated that the dressing tools are made of natural diamond only.
- The applicant was asked to give details of the purchases of rough diamonds. Accordingly, purchase bills evidencing purchase of 'rough diamonds' were submitted.



04. OBSERVATIONS

I have gone through the facts of both the cases. The products are "Diamond / CBN Grinding Wheels" and "Diamond Dresser". For both the products, claim is laid with respect to the schedule entry C-53A of the MVAT Act,2002. The entry reads thus :

"Industrial goods and tools made of Diamond, Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium, and alloys thereof, if any."

The schedule entry was introduced w.e.f 01.04.2013. It calls for requirements as follows :

- ***The goods should be industrial goods and tools;***
- ***These industrial goods and tools should be made of Diamond, Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium, and alloys thereof;***

Thus, it can be seen that the entry is specially carved out for industrial goods and tools. However, it does not cover all industrial goods and tools but only those which are made of Diamond, Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium, and alloys thereof. The argument of both the applicants' is that the word 'Diamond' as appearing in the above entry covers industrial and artificial or synthetic diamonds, too. It is contended that the entry does not lay down any condition as to the nature or origin of the word 'Diamond' as appearing therein. I would deal with the argument thus :

Alongside 'diamonds', the entry also mentions ***Gold, Silver, Platinum, Osmium,***

Palladium, Rhodium, Ruthenium. That Gold and Silver are the precious metals is known to all and the other precious metals are platinum, ruthenium, rhodium, palladium, osmium and iridium. The precious nature comes from the fact these are very scarce. They are a measure of wealth. The Wikipedia describes a 'precious metal' thus :

A **precious metal** is a rare, naturally occurring metallic chemical element of high economic value. Chemically, the precious metals tend to be less reactive than most elements (see noble metal). They are usually ductile and have a high lustre. Historically, precious metals were important as currency but are now regarded mainly as investment and industrial commodities. Gold, silver, platinum, and palladium each have an ISO 4217 currency code.

The best-known precious metals are the coinage metals, gold and silver. Although both have industrial uses, they are better known for their uses in art, jewellery, and coinage. Other precious metals include the platinum group metals: ruthenium, rhodium, palladium, osmium, iridium, and platinum, of which platinum is the most widely traded.[1] The demand for precious metals is driven not only by their practical use but also by their role as investments and a store of value. Historically, precious metals have commanded much higher prices than common industrial metals.

The website jewelrycentral.com describes the Platinum Group Metals (PGM) as commonly occurring together in nature and among the scarcest of the metallic elements. The PGM comprise six closely related metals:

1) **Platinum** - As a precious metal Platinum was first introduced after close to the end of the 19th century. The main characteristics of platinum are its deep luster and a vivid white color. Platinum is much more valuable than pure gold or palladium. Platinum is often used to produce the finest jewelry and for setting expensive gemstones. Platinum is one of the most popular metals of choice for ring settings, because the strength and color of platinum magnifies the brilliance and depth of diamonds and most precious gems. Because of its density and weight, you can feel the difference between platinum and other precious metals when comparing different types of jewelry. Platinum is usually marked with the following symbols: PL, PT, PLAT, 950 or PT950. Since platinum is the purest metal, it rarely causes an allergic reaction.
2) **Palladium** - Palladium (symbol Pd), relatively rare, silvery white and relatively soft metal. Was discovered in 1804 by the British chemist William Hyde. Palladium is often alloyed with gold, to produce white gold.
3) **Rhodium** - Rhodium, brilliant silvery white metal (symbol Rh) derives its name from Greek rhodon -rose , was discovered in 1803 by the British chemist William Hyde Wollaston. Pure rhodium is used as a plating finish for jewelry and silverware.
4) **Ruthenium** - Ruthenium (symbol Ru), chemically unreactive, grayish-white metal. Was discovered in 1844 by the Russian chemist Karl Klaus. Ruthenium and platinum alloys have a high resistance to wear and are used in the manufacture of jewelry, porcelain, etc.
5) **Iridium** - Iridium (symbol Ir), white, brittle and extremely hard metal. The alloy, which contains about 10 percent iridium and 90% platinum, is much harder than pure platinum. Alloys containing larger percentages of iridium are used in making precision and standard instruments, surgical tools, pen points.
6) **Osmium** - Osmium (symbol Os) bluish-white, brittle metal. Along with iridium, osmium is generally considered the most dense element. Was discovered in 1803 by the British chemist Smithson Tennant. Osmium and platinum alloys are used for standard weights and measures

The website 911metallurgist.com describes the world's 10 most precious metals thus -

1. **Rhodium** - This extremely rare, valuable and silvery-colored metal is commonly used for its reflective properties. It has a high melting point and an amazing ability to withstand corrosion.
   Largest producers: South Africa, Russia, Canada and other countries.
   Uses: Commonly used for its reflective properties — in objects like search lights, mirrors and jewelry finish. Also valuable within the automotive industry and in several types of industrial fields.
2. **Platinum** - Platinum has made a name for itself through its malleability, density and non-corrosive properties. This metal is also similar to palladium in its ability to withstand great quantities of hydrogen.
   Largest producers: South Africa, Russia, Canada and other countries.
   Uses: Jewelry, due to its lustrous look and remarkable resistance, dentistry, weaponry and aeronautics.
3. **Gold** - Because of its desirability, durability and malleability, gold remains one of the most popular metals and investment options. Gold is usually separated from surrounding rocks and minerals by mining and panning, upon which the metal is extracted with a combination of chemical reactions and smelting.
   Largest producers: South Africa, the United States, Australia and China.
   Uses: Jewelry and industrial uses. Its conductivity makes it a great component of electronics, and its reflective surface helps create better radiation shields and office windows.

4. **Ruthenium** - This member of the platinum metals retains many of the group's characteristics, including hardness, rarity and an ability to withstand outside elements.
   Largest producers: Russia, North and South America and Canada.
   Uses: Can be added as an alloy to platinum and palladium in order to increase hardness and better resistance. Ruthenium has become quite popular in the electronics field, as a way to effectively plate electric contacts.
5. **Iridium** - It's the most extreme member of the platinum group. This whitish metal has a super high melting point, is one of the densest elements around and stands as the most corrosion-resistant metal. Iridium is processed from platinum ore and as a by-product of nickel mining.
   Largest producers: South Africa.
   Uses: Contribute to advancements in medicine, electronics and automobiles. It's also used in products like pens, watches and compasses.
6. **Osmium** - One of the densest elements on Earth, osmium is a bluish-silver metal. This very hard, brittle metal has an extremely high melting point.
   Largest producers: Parts of Russia and North and South America.
   Uses: Used to harden platinum alloys for electrical contacts, filaments and other uses.
7. **Palladium** - This grayish-white, precious metal is valued because of its rarity, malleability, stability under hot conditions and ability to absorb a considerable amount of hydrogen at room temperature.
   Largest producers: Russia, South Africa, the United States, Canada and other various countries.
   Uses: Automobile makers rely on it for their catalytic converters to reduce emissions, jewelers use palladium to create "white gold" alloys and electronics manufacturers have the option of plating with it.
8. **Rhenium** - One of the densest metals, with the third highest melting point. Rhenium is a by-product of molybdenum, which essentially is a by-product of copper mining.
   Largest producers: Chile, Kazakhstan and the United States.
   Uses: Used in high-temperature turbine engines and added to nickel-based superalloys to improve temperature strength. Other uses include filaments, electrical contact material and thermocouples.
9. **Silver** - This element has the best electrical and thermal conductivity, as well as the lowest contact resistance of all the metals.
   Largest producers: Peru, China, Mexico and Chile.
   Uses: Jewelry, coinage, photography, circuitry, dentistry and batteries. It can also be used to stop the spread of bacteria in cell phone covers, control odor in shoes and clothing and prevent mold in treated wood.
10. **Indium** - A rare metal produced from zinc-ore processing, as well as lead, iron and copper ores. In its purest form, it presents the color white and it's extremely shiny and malleable.
    Largest producers: China, South Korea and Japan.
    Uses: During World War II, it was used as a coating for bearings in aircraft engines, but it can also be used to create corrosive-resistant mirrors, semiconductors, alloys and electrical conductivity in flat-panel devices.

The exercise to reproduce the information about precious metals was to drive home the point about the nature of the items mentioned in the schedule entry C-53A. Thus, it can be seen that ***Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium*** are the precious metals of high value. When we find 'diamond' as placed alongside these precious metals, there should not be even a moment's hesitancy to infer that the diamond herefor is the 'precious diamond'. I observe so as one finds varieties of diamonds such as artificial or synthetic diamond. The Encyclopædia Britannica on the Internet describes a diamond thus -

"a mineral composed of pure carbon. It is the hardest naturally occurring substance known; it is also the most popular gemstone. Because of their extreme hardness, diamonds have a number of important industrial applications. ..... The hardness, brilliance, and sparkle of diamonds make them unsurpassed as gems..... Diamonds vary from colourless to black, and they may be transparent, translucent, or opaque. Most diamonds used as gems are transparent and colourless or nearly so. Colourless or pale blue stones are most valued, but these are rare; most gem diamonds are tinged with yellow. A "fancy" diamond has a distinct body colour; red, blue, and green are rarest, and orange, violet, yellow, and yellowish green more common. Most industrial diamonds are gray or brown and are translucent or opaque, but better-quality industrial stones grade imperceptibly into poor quality gems. The colour of diamonds may be changed by exposure to intense radiation (as released in a nuclear reactor or by a particle accelerator) or by heat treatment....."

The Wikipedia describes natural and synthetic diamonds thus :

"**Most natural diamonds are formed at high temperature and pressure at depths of 140 to 190 kilometers (87 to 118 mi) in the Earth's mantle. Carbon-containing minerals provide the carbon source, and the growth occurs over periods from 1 billion to 3.3 billion years (25% to 75% of the age of the Earth).** Diamonds are brought close to the Earth's surface through deep volcanic eruptions by a magma, which cools into igneous rocks

known as kimberlites and lamproites. **Diamonds can also be produced synthetically in a HPHT method which approximately simulates the conditions in the Earth's mantle. An alternative, and completely different growth technique is chemical vapor deposition (CVD).** Several non-diamond materials, which include cubic zirconia and silicon carbide and are often called diamond simulants, resemble diamond in appearance and many properties. **Special gemological techniques have been developed to distinguish natural, synthetic diamonds** and diamond simulants."

Synthetic diamonds are further described thus –

"Synthetic diamond is diamond produced in an artificial process, as opposed to natural diamonds, which are created by geological processes. Synthetic diamond is also widely known as HPHT diamond or CVD diamond after the two common production methods (referring to the high-pressure high-temperature and chemical vapor deposition crystal formation methods, respectively). **While the term *synthetic* is associated by consumers with imitation products, artificial diamonds are made of the same material (pure carbon, crystallized in isotropic 3D form).** [1] In the U.S., the Federal Trade Commission has indicated that the alternative terms *laboratory-grown*, *laboratory-created*, and *[manufacturer-name]-created* "would more clearly communicate the nature of the stone"."

Diamonds are made naturally in the earth. Deep inside the earth, the pressure and temperature are both very high. Because of this, carbon is compressed into the regular crystal form of diamond. Because it is very compressed, diamond becomes very hard. It is the hardest substance on earth. It is also very, very rare. This is not true of synthetic diamonds as these are not the naturally occurring precious stones. This point assumes significance when the word 'diamond' comes in for interpretation with reference to entry 53A wherein precious metals are mentioned alongwith 'diamond'.

Then there is also a category called diamond simulants. Information on the Web reveals that a diamond simulant (diamond imitation or imitation diamond) is an object or material with gemological characteristics similar to those of a diamond. Simulants are distinct from synthetic diamond. Lab created diamonds are man-made diamonds that consist of actual carbon atoms arranged in the characteristic diamond crystal structure. Lab created diamonds are grown in highly controlled laboratory environments using advanced technological processes that duplicate the conditions under which diamonds naturally develop in the earth's crust. Once grown, cut and polished, these diamonds look identical to natural diamonds. Diamond simulants, such as cubic zirconia and moissanite, are diamond look-alikes and are not true carbon crystals. Simulants do not have the same chemical and physical properties as diamonds and therefore simulants sell at much lower prices than lab created diamonds. Fancy colored lab created diamonds sell at comparatively reasonable prices compared to their natural coloured diamond counterparts.

The above discussion can be concluded to observe that artificial or synthetic or diamond simulants or Lab created diamonds are not the naturally occurring precious stones and therefore, would not be read as 'diamonds' in the context of the entry 53A where diamonds share space with ***Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium.***

Then there are industrial diamonds, too. Encyclopædia Britannica (Website) explains an industrial diamond as being any diamond that is designated for industrial use, principally as a cutting tool or abrasive. It is further mentioned that -

*"In general, industrial diamonds are too badly flawed, irregularly shaped, poorly coloured, or small to be of value as gems, but they are of vital importance in the modern metalworking and mining industries. Their utility stems from the fact that diamond is the hardest natural substance known. **Industrial diamonds can be mined from natural deposits, or they can be produced synthetically. Among the naturally occurring diamonds, three varieties exist: ballas, bort, and carbonado.***

Ballas, or shot bort, is composed of concentrically arranged, spherical masses of minute diamond crystals. Ballas is extremely hard, tough, and difficult to cleave. Principal sources are Brazil and South Africa. Brazilian ballas is said to be the harder of the two.

Bort is a gray to black massive diamond, the colour of which is caused by inclusions and impurities. The name is also applied to badly coloured, flawed, or irregularly shaped diamond crystals that are unsuited for gem purposes. Drilling bort is composed of small, round stones averaging 20 to the carat and is used in diamond drill bits. Crushing bort, the lowest grade of diamond, is crushed in steel mortars and graded into abrasive grits of various sizes; 75 percent of the world's crushing bort comes from Congo (Kinshasa). Its chief use is in the manufacture of grinding wheels for sharpening cemented carbide metal-cutting tools, but it also is used as loose grains suspended in oil or water for lapping and polishing.

Carbonado, known in the trade as carbon, is black opaque diamond. It is as hard as crystallized diamond but less brittle, and, because its structure is slightly porous, it has a lower specific gravity (3.51 to 3.29). Carbonado has no cleavage and therefore is valuable for use in diamond-set tools. It usually occurs in small masses in the diamond-bearing gravels of Bahia, Brazil, and in Borneo, but it is also found in the Central African Republic and in Siberia. Rock-coring drills, widely used in exploring for new mineral deposits, are made by mounting diamonds around the rim of a hollow metal drill crown. Other important applications include saws for cutting rock and other hard materials, lathes and other types of cutting tools, glass cutters, phonograph needles, hardness testers, and wire-drawing dies.

By the early 21st century, Congo (Kinshasa) and Russia led the world in industrial diamond production. Other major producers of industrial diamonds include Australia and Botswana."

An article on 'DIAMOND, INDUSTRIAL' by Donald W. Olson on the United States Geological Services (USGS) - Mineral Resources Program states thus :

"Diamond is best known as a gemstone, but some of its unique properties make it ideal for many industrial and research applications as well. Current information on gem-grade diamond can be found in the U.S. Geological Survey (USGS) Minerals Yearbook chapter on gemstones. **Diamond that does not meet gem-quality standards for clarity, color, shape, or size is used as industrial-grade diamond.** ..... Diamond is the hardest known material and has the highest thermal conductivity of any material at room temperature. Diamond is more than twice as hard as its nearest competitors, cubic boron nitride and silicon nitride (Ravi, 1994, p. 537). **Because it is the hardest substance known, diamond has been used for centuries as an abrasive in cutting, drilling, grinding, and polishing. Industrial-grade diamond continues to be used as an abrasive for many applications. Even though it has a higher unit cost, diamond has proven to be more cost-effective in many industrial processes because it cuts faster and lasts longer than alternative abrasive materials (Boucher, 1997, p. 26.6). Diamond also has chemical, electrical, optical, and thermal characteristics that make it the best material available to industry for wear- and corrosion-resistant coatings, special lenses, heat sinks in electrical circuits, wire drawing, computing, and other advanced technologies. Both synthetic and natural diamond have industrial uses. Synthetic industrial diamond is superior to its natural diamond counterpart because its properties can be tailored to specific applications, and it can be produced in large quantities (Boucher, 1996). It is for these reasons that manufactured diamond accounts for more than 80% of the industrial diamond used in the United States and the world....**

Consumption

Diamond tools have numerous industrial functions. Diamond drilling bits and reaming shells are used principally for gas, mineral, and oil exploration. Other applications of diamond bits and reaming shells include foundation testing, masonry drilling, and inspecting concrete. The primary uses of point diamond tools are for dressing and truing grinding wheels and for boring, cutting, finishing, and machining applications. Beveling glass for automobile windows is another application. Cutting dimension stone and cutting/grooving concrete in highway reconditioning are the main uses of diamond saws; other applications include cutting composites and forming refractory shapes for furnace linings. Very fine diamond saws are used to slice brittle metals and crystals into thin wafers for electronic and electrical devices. Diamond wire dies are essential for high- speed drawing of fine wire, especially from hard, high-strength metals and alloys. The primary uses of diamond grinding wheels include edging plate glass, grinding dies, grinding parts for optical instruments, and sharpening and shaping carbide machine tool tips. Two types of natural diamond are used by industry—diamond stone (generally larger than 60 mesh/250 microns) and diamond bort (smaller, fragmented material). Diamond stone is utilized mainly in drilling bits and reaming shells used by mining companies; it also is incorporated in single- or multiple-point diamond tools, diamond saws, diamond wheels, and diamond wire dies. Diamond bort is used for drilling bits and as a loose grain abrasive for polishing. Other tools that incorporate natural diamond include bearings, engraving points, glass cutters, and surgical instruments. Synthetic diamond grit and powder are used in diamond grinding wheels, saws,

impregnated bits and tools, and as a loose abrasive for polishing. Diamond grinding wheels can be as much as 1 meter in diameter. Loose powders made with synthetic diamond for polishing are used primarily to finish cutting tools, gemstones, jewel bearings, optical surfaces, silicon wafers, and wiredrawing dies for computer chips. Hundreds of other products made from ceramics, glass, metals, and plastics also are finished with diamond powders. The use of polycrystalline diamond shapes (PDSs) and polycrystalline diamond compacts (PDCs) continues to increase for many of the applications cited above, including some of those that employ natural diamond. The use of PDSs, PDCs, and matrix-set synthetic diamond grit for drilling bits and reaming shells has increased in recent years. PDSs and PDCs are used in the manufacture of single- and multiple-point tools, and PDCs are used in a majority of the diamond wire-drawing dies.

Prices

Natural and synthetic industrial diamonds differ significantly in price (Boucher, 1997, p. 26.6). Natural industrial diamond normally has a more limited range of values. Its price varies from about $0.30 per carat for bort-size material to about $7 to $10 per carat for most stones, with some larger stones selling for up to $200 per carat. Synthetic industrial diamond has a much larger price range than natural diamond. Prices of synthetic diamond vary according to particle strength, size, shape, crystallinity, and the absence or presence of metal coatings. **In general, synthetic diamond prices for grinding and polishing range from as low as $0.40 to $1.50 per carat. Strong and blocky material for sawing and drilling sells for $1.50 to $3.50 per carat. Large synthetic crystals with excellent structure for specific applications sell for many hundreds of dollars per carat** (Law-West, 2002, p. 23.8). In 2003, the DNSC awarded bids that ranged from $11.37 to $56.55 per carat for NDS diamond stone sold, with the average awarded bid being $18.70 per carat (Mory, 2003)....

Both the above two references reveal that industrial diamonds can be both natural and synthetic. Further, both synthetic and natural diamond have industrial uses. However, from the price of natural industrial diamond (***Synthetic industrial diamond has a much larger price range than natural diamond***) as compared with price of synthetic industrial diamond, an inference is inevitable and which is that industrial diamond, though natural, cannot be regarded as a precious stone of high value. And therefore, cannot be placed alongside the precious metals ***Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium*** as mentioned in entry 53A.

It would also be useful to refer to some extracts from the Diamond Industry Report 2011. It states thus -

"Industrial-diamond demand: cutting faster, lasting longer

The second source of demand for diamonds comes from the industrial sector, where diamonds have numerous uses. In many industries they serve as an abrasive in cutting, drilling, grinding and polishing. They also play an important role in the production of construction and mining equipment, in auto manufacturing and in the aerospace industry. Even though they have a higher unit cost than other abrasives diamonds are more cost-effective overall because they cut faster and last longer than the alternatives. Demand for industrial diamonds is huge and vastly outpaces demand in the jewelry sector. **Within the overall industrial diamond market, less than 5 percent are natural; the rest are synthetically made** (see Figure 59). **But those natural industrial diamonds account for about half of all mined diamonds, and they are mostly the smallest and lowest-value stones among natural diamonds. The larger natural stones end up in the jewelry market because larger stones have a much higher per carat price. In industrial uses synthetic stones function just as well as natural ones and even have some advantages. They can be manufactured according to highly specific needs and applications, for example, and they can be produced inexpensively in large quantities. Although total demand for synthetic diamonds is extremely large, their value is much smaller than that of mined diamonds,** and the price of manufacturing synthetic diamonds has recently dropped because of improvements in technology. Barring a technological breakthrough, however, no major price declines are expected in the near future."

The above Report also reveals that natural diamonds used as industrial diamonds are lowest-value stones among natural diamonds and are not comparable to the precious diamond. The quality of a diamond gemstone is primarily determined by four factors: color, cut, clarity and carats. Small diamonds cost less per carat than larger stones of equal quality. This is because very small stones are very common and large stones are especially rare. An industrial diamond is, therefore, rightly defined as

"a small often synthetic diamond, valueless as a gemstone, used in cutting tools, abrasives, etc" (Dictionary.com). This information when used to construe the scope of the entry 53A would help see that since 'diamond' is clubbed alongside ***Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium*** in the entry 53A above, it couldn't be anything but a precious stone placed with the precious metals of high value.

My observations about the entry find strong support from a decision of the Hon. Madras High Court in the case of State of Madras v. Harshkant S. Mehta (31 STC 365 1973) wherein it was held that *the popular and commercial meaning given to the word "diamond" will not take in industrial diamond, for the word "diamond" is normally attributed in the commercial circles to that used as a gem stone in an ornament.* It was also observed that *merely because industrial diamond has got one (hardness) of the many characteristics of a precious stone, it cannot be said to be a gem stone or a precious stone.* The Hon. Court was faced with interpreting as to whether 'industrial diamonds' could fall in the entry for 'Precious stones, namely, diamonds..'. The Hon. Court in the decision given on dt.26.09.1972 (reported in the year 1973) while referring to the dictionary meanings observed thus -

"**From the above definitions of precious stone, it is manifest that a precious stone must be a gem of value and beauty used for ornaments and it is only such diamonds, emeralds, rubies, pearls and sapphires, which are gems of value and beauty that will come under the definition of "precious stone"** referred to in item 30 to Schedule I. **It is not disputed that industrial diamonds are never used for ornaments and that they are fitted in tools and implements used for cutting and drilling, etc. It is neither a stone of such value and beauty as could be used for ornamentation, nor can it be called a gem or a jewel. The price of industrial diamond ranges only between Rs. 20 to Rs. 30 per carat while diamond as a precious stone would cost from Rs. 1,000 to Rs. 3,000.**

.....

We are of the view that the use of the word "namely" after the words "precious stones" indicates that what comes after that word is only illustrative or descriptive of the words "precious stones". Therefore, even though industrial diamond may in one sense be called a "diamond" because it comes from the very genus, it cannot be taken as a precious stone as normally understood in commercial circles. The collocation and the setting in which the words, "diamonds, emeralds, rubies, pearls, etc.," have been used show that it is only precious stones which are used for the purpose of ornamentation that will come under that item. A precious stone is normally a gem stone noted for its rarity, beauty, lustre, hardness and high value. Diamond is a mineral compound solely of carbon and it is the hardest of all known substances. Its optical properties give it a beauty that makes it desirable as a gem. **Industrial diamond is a by-product of gem industry and somewhat of low grade diamond without the requisite optical properties so as to make it a gem. Though the most distinctive characteristic of diamond is hardness and its hardness makes it valuable as an industrial tool, it has not the other properties of a gem stone.** As the diamond crystal is not equally hard in all directions, the crystal is set singly for use in cutting tools. But gem diamonds are crystals cut and polished with many facets and are graded and priced according to perfection, colour, cutting and size. It is the cutting which brings out the best features of a diamond and makes it a gem. **Industrial diamond, on the other hand, has no lustre, brilliance or beauty though it may have the same hardness as a gem stone. It is practically of very little value and not a rarity. It can never by used as an ornament. The value of precious stone depends largely on four factors, beauty, rarity, durability and to some degree the dictates of vogue.** To import the choice as an object of personal adornment it must be beautiful and also durable. But, however, unless these attributes of beauty and durability are combined with rarity its value will not be high. The properties of precious stones determine their suitability and desirability for use as gems, and gems take for their beauty on the properties of brilliance, dispersion, colouring and lustre. **An industrial diamond has got only one of the properties**

of a diamond as a precious stone that is, hardness. But merely because industrial diamond has got one of the many characteristics of a precious stone, it cannot be said to be a gem stone or a precious stone.

.....But in this case, the popular and commercial meaning given to the word "diamond" will not, in our view, take in industrial diamond, for the word "diamond" is normally attributed in the commercial circles to that used as a gem stone in an ornament. Normally when we go to a jeweller and ask for a diamond he would not show an industrial diamond. Therefore, in the commercial world industrial diamond has got a separate connotation from the diamonds which are used as gem stones for ornaments."

There is also a determination order No.DDQ-1194/ADM-5/B-4 dt.18.03.1995 in the case of M/s. Mysore Petro Chemicals Ltd. wherein 'Synthetic Industrial Diamond' was held as not covered by the then schedule entry for 'Precious stones' under the Bombay Sales Tax Act,1959 but as an unclassified item under the residuary entry of the said Act.

I also find that even under the Import Policy of India, the following explanations have been given :

"4. (A) The expression "precious metal" means silver, gold and platinum.
(B) The expression "platinum" means platinum, iridium, osmium, paalladium, rhodium and ruthenium....."

After detailed deliberations as at above, I am convinced that the word 'diamond' as appearing in the impugned entry would mean diamond as in a precious stone and not artificial, synthetic, or industrial diamonds. With this understanding, I take a look at the impugned products thus –

<u>"Diamond / CBN Grinding Wheels"</u>

It is informed that the product is made from synthetic industrial diamond powder which is imported alongwith other materials such as Binders like, Resin, Metal, vitrified (Glass), Electroplating (Nickel), filler materials and is then mounted on Aluminum/other material core. We have seen above that, even generally, 'synthetic industrial diamond' can in no sense be understood to mean a 'diamond'. And moreso when the word 'diamond' is placed alongside precious metals *Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium* as specified in the entry, it could not in any sense be construed as covering 'synthetic industrial diamond/powder' under its fold. With the facts being so, I need not even deliberate on the point as to whether the impugned product could be said to be made of 'diamond' with regard to the composition of the materials that go into the making of the product or discuss on the proportion of 'diamond' as contained in the impugned product so as to construe the impugned product as an industrial tool made of 'diamond'. In view of the detailed observations as at above, I have to hold that the impugned product claimed to be an industrial tool comprising of synthetic industrial diamond powder would not be covered by the scope of the entry 53A. The entry is very precisely and unambiguously worded as requiring an industrial tool to be made of 'Diamond'. Therefore, a tool comprising of 'Synthetic industrial diamond powder' would not

find placed in the said schedule entry. There is no specific schedule entry covering the impugned product. In view thereof, the product finds placed in the residuary schedule entry E-1, thereby taxable @12.5%.

"Diamond Dresser"

It is informed that the product is made from natural Industrial Diamonds alongwith other materials such as Metal/Matrix Powder viz Sponge iron/Tungsten/Copper Alloys, Brazing Filler materials, Graphite moulds and rods and Bright Bars/M S Shanks. It is informed that the impugned product is made from rough diamonds (natural). The purchase bills submitted by the applicant evidence purchase of rough diamonds. We have seen above that natural diamonds used as industrial diamonds are lowest-value stones among natural diamonds and are not comparable to the precious diamond. We have also seen the observations of the Hon. Madras High Court that *merely because industrial diamond has got one (hardness) of the many characteristics of a precious stone, it cannot be said to be a gem stone or a precious stone.* Rough diamond refers to a diamond which has not yet been cut. Raw diamond and a cut and polished diamond are different and distinct commodities having different uses. It would also be useful to refer to some extracts from the Diamond Industry Report 2011. It states thus -

"Rough-diamond pricing: supply and level of dealer speculation are key drivers
Unlike with precious metals such as gold, silver or platinum or base metals like zinc or copper, no globally set prices for rough diamonds exist. Their prices are nontransparent and are set by major producers via sights and determined by tenders. Rough-diamond prices have been showing a steady growth trend of about 3 percent per year (see Figure 38). Two factors have tended to affect rough-diamond price performance over the years: major macroeconomic trends and internal industry dynamics."

Thus, it can be seen that rough diamonds could not be called a 'precious stone'. Even the applicant, during hearing, refers to 'rough diamond' as being other than 'gem stone'. These are the rough diamonds of the non-gem variety. We have seen above that the Hon. Madras High Court has held that 'diamond' is normally understood to be a 'gem stone'. Therefore, rough diamond of the non-gem variety can in no sense be understood to mean a 'diamond'. And to reiterate what has been observed by me above, when the word 'diamond' is placed alongside precious metals ***Gold, Silver, Platinum, Osmium, Palladium, Rhodium, Ruthenium*** as specified in the entry, it could not in any sense be construed as covering 'rough diamond' of the non-gem variety under its fold. With the facts being so, I need not deliberate on the point as to whether the impugned product could be said to be made of 'diamond' with regard to the composition of the materials that go into the making of the product or discuss on the proportion of 'diamond' as contained in the impugned product so as to construe the impugned product as an industrial tool made of 'diamond'. Therefore, the detailed observations as at above make me hold that the impugned product claimed to be an industrial tool comprising of rough diamond of the non-gem variety would not be covered by the scope of the entry 53A. The entry unquestionably requires an industrial tool to be made of 'Diamond'. Therefore, a tool

comprising of 'rough diamond' of the non-gem variety would not find placed in the said schedule entry. There is no specific schedule entry covering the impugned product. The product, therefore, finds placed in the residuary schedule entry E-1, thereby taxable @12.5%.

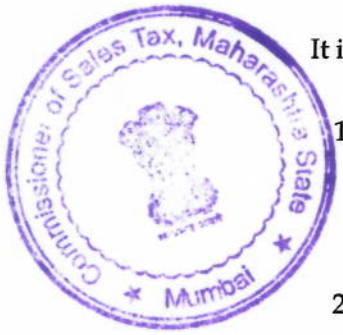
I find that both the applicants' have been rightly collecting tax @12.5% on the sales of the impugned products.

05. In view of the detailed deliberations, it is ordered thus -

ORDER

(under section 56 (1) (e) of the Maharashtra Value Added Tax Act, 2002)

No.DDQ/11-2013/Adm.6/33-34/B - 2 **Mumbai, dt.** 14/08/2015



It is herewith determined thus -

1. The products "Diamond / CBN Grinding Wheels" and "Diamond Dresser" are not covered by the schedule entry C-53A of the Maharashtra Value Added Tax Act, 2002.
2. In absence of a specific schedule entry, the products find placed in the residuary schedule entry E-1 of the MVAT Act,2002, thereby taxable @12.5%.

(RAJIV JALOTA)

COMMISSIONER OF SALES TAX,
MAHARASHTRA STATE, MUMBAI