IN THE CUSTOMS, EXCISE AND SERVICE TAX APPELLATE TRIBUNAL
CHENNAI

REGIONAL BENCH – COURT NO. I

Customs Appeal Nos. 42216 to 42236 of 2013

(Arising out of Order-in-Appeal Nos. 160 to 180/2013 (TTN) dated 23.08.2013 passed by the Commissioner of Customs and Central Excise (Appeals), No. 1, Williams Road, Cantonment, Tiruchirappalli – 620 001)

M/s. DCW Limited **: Appellant**
Sahupuram & P.O.,
Tuticorin District – 628 229

VERSUS

Commissioner of Customs **: Respondent**
Custom House, New Harbour Estate, Tuticorin – 628 004

AND

Customs Appeal No. 41778 of 2013

(Arising out of Order-in-Appeal No. 47/2013 (TTN) dated 17.05.2013 passed by the Commissioner of Customs and Central Excise (Appeals), No. 1, Williams Road, Cantonment, Tiruchirappalli – 620 001)

Commissioner of Customs **: Appellant**
Custom House, New Harbour Estate, Tuticorin – 628 004

VERSUS

M/s. DCW Limited **: Respondent**
Sahupuram & P.O.,
Tuticorin District – 628 229

APPEARANCE:

Shri S. Jaikumar, Advocate
Shri M. Karthikeyan, Advocate
for the Assessee

Shri R. Rajaraman, Assistant Commissioner
for the Revenue

CORAM:

HON'BLE MR. P. DINESHA, MEMBER (JUDICIAL)
HON'BLE MR. VASA SESHAGIRI RAO, MEMBER (TECHNICAL)

FINAL ORDER NOs. 40501-40522/2023

DATE OF HEARING: 12.06.2023

DATE OF DECISION: 28.06.2023

Order : [Per Hon'ble Mr. P. Dinesha]

The facts that have led the rival parties before this bench, which could be gathered from the orders of lower authorities and upon hearing the rival contentions, are that the assessee is engaged in the manufacture of Titanium Dioxide (TiO_2) which is exported as "Upgraded Beneficiated Ilmenite (Synthetic Rutile) TiO_2 95% Min. Moisture 0.5% Max." The same was declared under Tariff Item No. 2823 00 90 of the Customs Tariff and it is a matter borne on record that the assessee has been declaring the said item under the said Tariff Heading since 1986. It is apparent from the record that the above product has also been cleared in the domestic market under the very same classification under the Central Excise Tariff (CET) since 1986. In fact, copy of invoices placed on record supports the above claim.

1.2 Similar to its earlier exports, the assessee filed two shipping bills both dated 02.03.2013, for export of Upgraded Beneficiated Ilmenite (Synthetic Rutile) under CTH 2823. The Revenue, however, not accepting the above classification of these goods, sought to classify the same under CTH 2614 00 20.

1.3 Not satisfied with the reply filed by the assessee for the re-classification by the Revenue, the Assistant Commissioner of Customs, Tuticorin vide Order-in-Original No. 575/2013 classified the goods under export under Tariff Item No. 2624 00 20, as proposed. It appears from the record that the appellant-assessee preferred an appeal before the first appellate authority against the said reclassification by the adjudicating authority and the first appellate authority vide Order-in-Appeal No. 47/2013 (TTN) dated 17.05.2013, accepted the classification made by the assessee thereby setting aside the re-classification proposed and confirmed by the original authority.

1.4 Against the said Order-in-Appeal, the Revenue has preferred Customs Appeal No. 41778 of 2013 before this forum.

2.1 Further, it appears that the assessee filed another set of 21 shipping bills between 03.04.2013 and 14.05.2013 for export of the very same material by classifying the same under CTH 2823. But, however, the adjudicating authority proceeded to reclassify the same under Tariff Item No. 2614 00 20.

2.2 It appears that the assessee filed appeals against the said reclassification before first appellate authority. But however, this time, the first appellate authority appears, vide Order-in-Appeal Nos. 160 to 180/2013 dated 23.08.2013, to have not accepted the classification adopted by the assessee and confirmed the reclassification of the adjudicating authority. It is against this order of the first appellate authority that the assessee has filed another set of appeals in Customs Appeal Nos. 42216 to 42236 of 2013, before this forum.

3. Agreeably, the issue revolves round the classification of the same material in both the appeals filed by the Revenue as well as the assessee and hence, for convenience, all the appeals are heard together and are being disposed of by this common order.

4. Shri S. Jaikumar, learned Advocate, appeared for the assessee and Shri R. Rajaraman, learned Assistant Commissioner, argued for the Revenue.

5.1 Submissions of the Ld. Advocate could be summarised as below: -

(i) The assessee normally procures raw Ilmenite ore containing 50 to 54% of Titanium Dioxide (TiO_2), either from M/s. Indian Rare Earths Ltd. or imports the same from outside. Naturally, the ore so

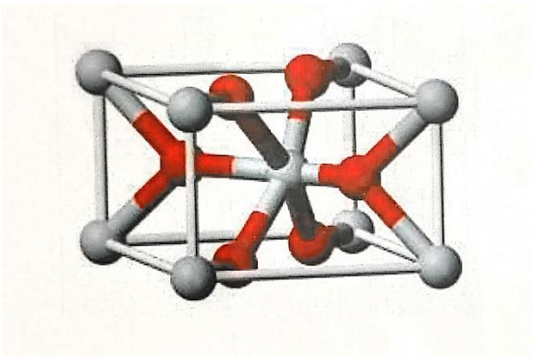
procured is impure, with 5-10% of other materials like Garnet, Silica and other heavy metal traces.

(ii) Raw Ilmenite ore procured would be having impurities, i.e., Ilmenite ($FeTiO_3$) as well as Ferric Oxide (Fe_2O_3), along with other many impurities. The material so procured would then be subjected to various processes, both physical as well as chemical, to start with electrostatic separation using electrostatic separators, wherein some of the impurities like Garnet, Silica, etc., would get separated. The same is further subjected to a magnetic separation process to eliminate magnetic and non-magnetic impurities.

(iii) It is thereafter that the ore is subjected to the process of Roasting in a rotary furnace at a high-temperature of about 900°C using coke or charcoal, during which oxides from the above ore would combine with the Carbon in the charcoal and thus Carbon Dioxide mixture gets liberated, thereby leaving the Ilmenite concentrate.

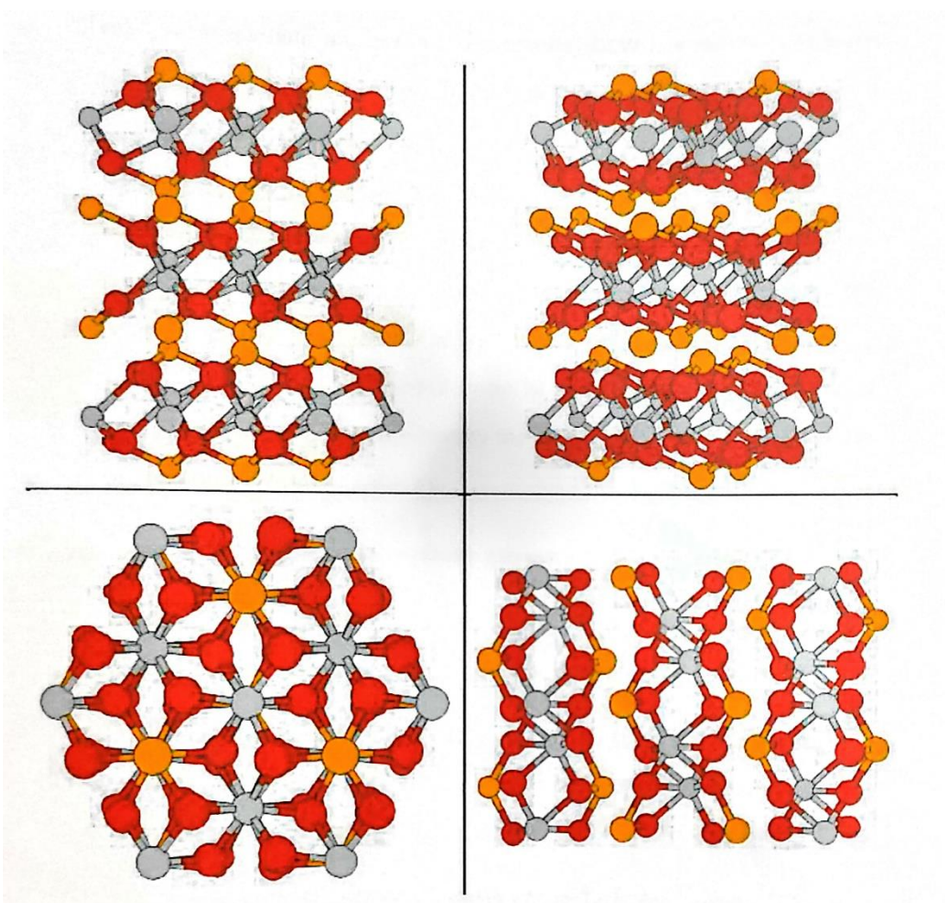
(iv) The roasted ore is thereafter charged to a digester wherein Leaching process takes place, with Hydrochloric Acid of about 30 to 31% concentrate. The said leaching process is repeated multiple times under high-pressure and temperature until the iron content drops from 33-35% to 2.5%, and hence this process of leaching is treated as the most crucial step/process whereby the Iron [Fe] content in the said Ilmenite ore [$FeTiO_3$] is converted into Ferric Chloride [$FeCl_3$], thereby leaving Titanium Dioxide [TiO_2] of the highest possible purity and moisture.

(v) Typically, 'Rutile' would mean a molecular structure having tetragonal shape, as given below: -

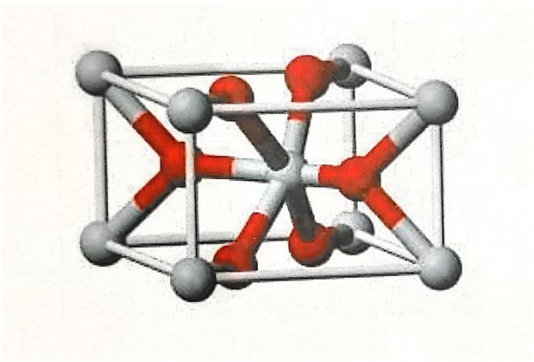


(vi) Rutiles are generally of two types, namely, natural Rutile and synthetic Rutile and the common difference is in their molecular structure. If the molecular structure is tetragonal in the natural state of the mineral, then they are natural Rutiles. If the tetragonal molecular structure, which is called rutile structure, is achieved by any chemical processes, then the same is called synthetic Rutile.

(vii) The original raw Ilmenite procured by the assessee will be having the following hexagonal structure :



(viii) After subjecting the procured ore to various processes ending with the process of Leaching, the following TETRAGONAL molecular structure is obtained:



(ix) It is in the leaching process that the crucial manufacturing process happens, resulting in the change of the molecular structure from hexagonal Ilmenite to tetragonal Titanium Dioxide. This rutile structure is not occurring naturally, but is achieved by means of chemical reaction in the process of leaching in the digesters, and therefore the assessee had only mentioned the same as synthetic Rutiles and not natural Rutiles.

(x) The resultant synthetic rutile Ilmenite slurry is transferred to slurry tanks after blowing down the supernatant liquor, which is thereafter subjected to the next stage of the process.

(xi) The slurry so obtained contains about 30-40% solids and such solids are then separated from slurry by vacuum filtration operation, by which the moisture content is reduced to 20-25%.

(xii) The above operations result in getting wet cakes which are calcined in oil-fired rotary calciners by direct contact of flue gas with coke whereby, the moisture content further reduced to 1.5% - 2% and thus, the final product emerges.

5.2 The Ld. Advocate took us through the relevant entries of the Tariff Heading 2614 as it stood at the relevant point of time, which is reproduced below for convenience: -

2614	**-**	**Titanium Ores and Concentrates**
2614 00	-	Titanium Ores and concentrates :
2614 00 10	---	Ilmenite, unprocessed
2614 00 20	---	Ilmenite, upgraded (beneficiated Ilmenite including Ilmenite ground)
	---	*Rutile :*
2614 00 31	----	Rare earth oxides including rutile sand
2614 00 39	----	Other
2614 00 90	---	Other

5.3 Further, Explanatory Notes (General Notes) of Chapter 26 and the heading 26.14 of HSN, which are also relevant, are also reproduced hereinbelow, for convenience: -

> "Headings 26.01 to 26.07 are limited to metallic ores and concentrates which:
>
> (A) Are of mineralogical species actually used in the metallurgical industry for extraction of the metals of Section XIV or XV, of mercury or of the metals of heading 28.44, even if they are intended for non-metallurgical purposes, and
>
> (B) Have not been submitted to processes not normal to the metallurgical industry.
>
> The term "ores" applies to metalliferous minerals associated with the substances in which they occur and with which they are extracted from the mine; it also applies to native metals in their gangue (e.g., metalliferous sands).
>
> Ores are seldom marketed before "preparation" for subsequent metallurgical operations. The most important preparatory processes are those aimed at concentrating the ores.
>
> For the purposes of headings 26.01 to 26.17, the term "concentrates" applies to ores which have had part or all of the foreign matter removed by special treatments, either because such foreign matter might hamper subsequent

metallurgical operations or with a view to economical transport.

Processes to which products of headings 26.01 to 26.17 may have been submitted include physical, physiochemical or chemical operations, provided they are normal to the preparation of the ores for the extraction of metal. With the exception of changes resulting from calcination, roasting or firing (with or without agglomeration), such operations must not alter the chemical composition of the basic compound which furnishes the desired metal.

The physical or physico-chemical operations include crushing, grinding, magnetic separation, gravimetric separation, floatation, screening, grading, agglomeration of powders (e.g., by sintering or pelleting) into grains, balls or briquettes (whether or not with the addition of small quantities of binders), drying, calcination, roasting to oxidise, reduce or magnetise the ore, etc. (but not roasting for purposes of sulphating, chloridating, etc.)

The chemical processes are aimed at eliminating the unwanted matter (e.g., dissolution).

Concentrates of ores obtained by treatments, other than calcining or roasting, which alter the chemical composition or crystallographic structure of the basic ore are excluded (generally Chapter 28).”

…

“**26.14 – Titanium ores and concentrates.**

The principal ores generally classified in this heading are :

(a) Ilmenite (or titaniferous iron ore), iron titanite.

(b) Rutile, anatase and brookite, titanium oxides.

The heading excludes finely ground titanium ores for use as pigments (Chapter 32).”

5.4.1 Further reference was drawn to the relevant entries of the Tariff - Chapter 28 as it stood at the relevant point of time, which reads as under: -

2823		**Titanium oxides**
2823 00	-	*Titanium oxides :*
2823 00 10	---	Titanium dioxide
2823 00 90	---	Other

5.4.2 The HSN Explanatory Notes to Chapter 28 read as under: -

> **"28.23 – Titanium oxides.**
>
> The only titanium oxide of commercial interest is titanium dioxide or titanic anhydride (TiO_2), which gives the titanates of heading 28.41.
>
> It is an amorphous powder, specific gravity about 4; white but turns yellow when heated.
>
> This heading covers titanium dioxide that is not mixed or surface-treated, but it excludes titanium dioxide to which compounds have been intentionally added during the production process in order to obtain certain physical properties rendering it suitable for use as a pigment (heading 32.06) or for other purposes (e.g., headings 38.15, 38.24)
>
> The heading further excludes:
>
> (a) Natural titanium dioxide (rutile, anatase, brookite), an ore (heading 26.14).
>
> (b) Orthotitanic acid [$Ti(OH)_4$] and metatitanic acid [$TiO(OH)_2$] (heading 28.25)."

5.5 Referring to the above, Ld. Advocate contended that the concentrates of ores obtained by treatments, other than calcining or roasting, which alter the chemical composition or crystallographic structure of the basic ore are generally classified under Chapter 28; the Ilmenite ore in the present case that are purchased/procured, are subjected to both physical and chemical processes during the conversion from Ore to synthetic Rutile; the chemical

formula of mineral ore is $FeTiO_3$ and its crystal structure is hexagonal. The synthetic Rutile that is finally exported, is identified with the chemical formula TiO_2 and its crystal/molecular structure is tetragonal.

5.6 Our attention was drawn to the following test reports of the experts, wherein it has been opined that there is a chemical as well as crystallographic change in the impugned product, and the same occurs after the process of leaching, which happens at the digesters: -

Sl. No.	**Name of the Organization**	**Report Reference No.**
1	CSIR – Institute of Minerals & Materials Technology	TSP-001/07/14/210 dated 14-08-2014
2		TSP-001/11/14/218 dated 12-11-2014
3	Pondicherry University, Department of Earth Science	PU/Esc/SB/DCW-02 dated 11-05-14
4	Bhabha Atomic Research Centre (BARC)	ACD/Sample/AVRReddy/RKS/224 dated 19-02-2014

5.7 It is their further case that the leaching process is a widely used technique which converts metals into soluble salts in aqueous media and in this process, the Ore undergoes repeated physical change whereby, almost pure titanium dioxide [TiO_2] is obtained. From the test reports, it is evident that the change occurs during the process of leaching, as the chemical and crystallographic changes have occurred due to leaching process which is nothing but a chemical reaction and hence, such change cannot be attributed to the process of roasting/calcination. This is supported by the expert evidence. Hence, applying the HSN, it is submitted that the goods are classifiable only

under Chapter 28 and not under Chapter Heading 2614 of the Customs Tariff.

5.8 It was submitted that as per HSN, only the natural Rutiles are excluded from Chapter Heading 2823 whereas, in the instant case, the products are synthetic Rutiles, derived through chemical processes, and hence the same cannot be excluded.

5.9 Reference was also invited to the test report dated 12.08.2009 by the Bureau of Mines, Bangalore, which was issued at the behest of the Department while exporting the same product during 2009. It is very clear from the said report that there has been a chemical as well as crystallographic change in the Ilmenite Ore to the synthetic Rutile, in the case of this very assessee.

5.10 The Ld. Advocate relied on the following judicial presidents, in support of his case:

a. *Commissioner of Cus. & C.Ex., Amritsar v. D.L.Steels [2022 (381) E.L.T. 289 (S.C.)]* - the Hon'ble Supreme Court has held that the onus of establishing the classification would rest on the Revenue wherever the Revenue disputes the classification declared by an assessee.

Following orders of co-ordinate benches are also relied upon:

b. Trimax Sands Pvt. Ltd. v. Commissioner of Cus., Visakhapatnam [2019 (369) E.L.T. 1467 (Tri. – Hyd.)]

c. Commissioner of C.Ex., Chandigarh v. C.S. Zircon Products Pvt. Ltd. [2008 (228) E.L.T. 213 (Tri. – Del.)]

6.1 *Per contra*, Ld. Assistant Commissioner relied upon the findings of the lower authorities. He would also submit that: -

(i) As per the principles underlying the classification, the impugned goods should be classified under CTH 2614 only since the description of the declared goods was mentioned as "Upgraded Beneficiated Ilmenite (Synthetic Rutile) TiO_2 95% Min." by the assessee itself.

(ii) The process of leaching carried out only reflects that there was an increase in the concentration of TiO_2 and thereby resulting in the reduced FeO content.

(iii) Even the final product is claimed to have 95% of Titanium and 5% of impurities. This indicates that the Titanium is not fully separated from the Ore.

(iv) The description itself therefore clearly indicates that Ilmenite still contains TiO_2 and not pure TiO_2.

(v) The test report of the Department of Earth Science, Pondicherry University referred to by the Commissioner (Appeals) was not available with the adjudicating authority.

(vi) Moreover, the logic behind the conclusion is not forthcoming from the report of Pondicherry University, as to how the university concluded that the change in the structure occurs only during the process of leaching. The report of the Puducherry University indicates that the crystallographic structure change of the product happens during the process of leaching whereas, the website of Kerala Minerals indicates that the chemical change and crystallographic change can occur only during the process of roasting.

6.2 He placed reliance on an order of this Bench in the case of *M/s. V.V. Minerals v. Commissioner of Customs, Tuticorin [2016 (332) E.L.T. 888 (Tribunal – Chennai)].*

7.1 In his rejoinder, Ld. Advocate would submit that the classification under Customs law is based on facts, science, legal prescription, Chapter/Section, Notes, HSN and of course, judicial precedents and certainly not based on a mere description; even if the Revenue were to go by the description, then they have to go by what the assessee had described, that is "Synthetic Rutile - TiO_2 95% Min." and certainly not natural Rutile which are excluded from CTH 2823.

7.2 He also contended that nowhere had the assessee claimed that what it exported was pure TiO_2 and it is precisely for this reason that the impugned element/material has to be classified under Tariff item No. 2823 00 90 and not 2823 00 10.

7.3.1 With regard to the contentions of the Ld. Departmental Representative on the test reports, it was replied that Department did not even bother to test the goods till date, even though they disputed chemical composition, and hence obtaining a test report from an expert, which is of utmost relevance, would have benefited both the Revenue as well as the *bona fide* assessee; even in the appeal filed by the Revenue they have not questioned the correctness of or the genuineness of the certifying agency. The initial burden having not been discharged by the Revenue, disregarding the test report given by some of the experts in the field like BARC, CSIR, which are Govt. agencies, is only an attempt to cover up their deficiencies.

7.3.2 He would further contend that the reports are given by experts in the field who are undisputedly quite competent to issue such certificates and they are known for their scientific research.

7.4 He would also distinguish the order in the case of *M/s. V. V. Minerals (supra)*, contending that the issue in the said case was totally different, was about classification

of Ilmenite upgraded (processed) and Ilmenite unprocessed falling under CTH 26140020 and 26140010 respectively. In the instant case, the dispute is between CTH 2614 and 2823. There was also no reference to any chemical process resulting in the change of chemical composition or crystallographic structure in the said case of *M/s. V. V. Minerals*, unlike in their case.

7.5 With regard to the reliance on the website of Kerala Minerals, he would contend the same has to be ignored since a third-party website cannot outweigh the expert opinion obtained from reputed Government testing houses like CSIR, BARC and Pondicherry University.

8. We have heard the rival contentions, we have perused the orders of lower authorities, and we have also carefully considered test reports/certificates issued by the various organisations.

9. After hearing both sides, we find that the only issue that is to be decided by us is: whether the item exported by the assessee namely "Upgraded Beneficiated Ilmenite (Synthetic Rutile) TiO_2 95% Min. Moisture 0.5% Max." is classifiable under CTH 2614 as contended by the Revenue, or CTH 2823 as declared by the exporter-assessee?

10. At the foremost, it is essential to understand the importance of a structure of a molecule. It is the structure that determines the chemical and physical properties of a substance. The shape of a molecule can affect how it contacts with other molecules, including how it binds to receptors in the body or how it reacts with other substances in a chemical reaction. The understanding of the structure of molecules is therefore essential in fields of chemistry, biochemistry and pharmacology as it allows scientists to predict and control the behaviour of these molecules. Additionally, the knowledge of the structure of molecules is important for the design and development of new drugs, materials and other products.

11. We will consider the above at the appropriate point, in this order since we understand from various websites the above is the most fundamental in the study of molecular structures.

12. At the cost of repetition, we reproduce the relevant CTH, hereinbelow:

2614	**-**	**Titanium Ores and Concentrates**
2614 00	-	Titanium Ores and concentrates :
2614 00 10	---	Ilmenite, unprocessed
2614 00 20	---	Ilmenite, upgraded (beneficiated Ilmenite including Ilmenite ground)
	---	*Rutile :*
2614 00 31	----	Rare earth oxides including rutile sand
2614 00 39	----	Other
2614 00 90	---	Other

…

2823		**Titanium oxides**
2823 00	-	*Titanium oxides :*
2823 00 10	---	Titanium dioxide
2823 00 90	---	Other

13.1 There is no dispute that the goods procured by the assessee is raw Ilmenite and the percentage of Titanium dioxide concentration is only about 54 to 55%. It has been explained by the Ld. advocate that the Ore so procured would be subjected to physical as well as chemical processes, firing them in a roasting furnace along with charcoal/coke, which results in reducing the oxygen content from the raw ore.

13.2 It has been explained by the Ld. Advocate that the ore would be subjected to a series of physical and chemical processes and in the end, the reduced Ilmenite ore gets into a chemical transformation, whereby the Hexagonal molecular structure of Ilmenite ore changes into a

Tetragonal molecular structure as Rutile of TiO_2. This argument, according to the Ld. Advocate, finds support from the test reports issued by the testing houses like CSIR and BARC.

14. We find that Revenue has nowhere disputed the fact of crystallography change between the raw Ilmenite Ore and the final product. In any case, therefore, we find that it is the HSN Explanatory Notes which guide us to the most appropriate classification, especially where scientific facts are involved.

15.1 We find it relevant to have a re-look into the Explanatory Notes (General Notes) of Chapter 26 and the heading 26.14 of the HSN, which are reproduced below: -

> "Headings 26.01 to 26.07 are limited to metallic ores and concentrates which:
>
> (C) Are of mineralogical species actually used in the metallurgical industry for extraction of the metals of Section XIV or XV, of mercury or of the metals of heading 28.44, even if they are intended for non-metallurgical purposes, and
>
> (D) Have not been submitted to processes not normal to the metallurgical industry.
>
> The term "ores" applies to metalliferous minerals associated with the substances in which they occur and with which they are extracted from the mine; it also applies to native metals in their gangue (e.g., metalliferous sands).
>
> Ores are seldom marketed before "preparation" for subsequent metallurgical operations. The most important preparatory processes are those aimed at concentrating the ores.
>
> For the purposes of headings 26.01 to 26.17, the term "concentrates" applies to ores which have had part or all of the foreign matter removed by special treatments, either because such foreign matter might hamper subsequent metallurgical operations or with a view to economical transport.
>
> Processes to which products of headings 26.01 to 26.17 may have been submitted include physical, physiochemical or chemical operations, provided they are normal to the preparation of the ores for the extraction of metal. With the

exception of changes resulting from calcination, roasting or firing (with or without agglomeration), such operations must not alter the chemical composition of the basic compound which furnishes the desired metal.

The physical or physico-chemical operations include crushing, grinding, magnetic separation, gravimetric separation, floatation, screening, grading, agglomeration of powders (e.g., by sintering or pelleting) into grains, balls or briquettes (whether or not with the addition of small quantities of binders), drying, calcination, roasting to oxidise, reduce or magnetise the ore, etc. (but not roasting for purposes of sulphating, chloridating, etc.)

The chemical processes are aimed at eliminating the unwanted matter (e.g., dissolution).

Concentrates of ores obtained by treatments, other than calcining or roasting, which alter the chemical composition or crystallographic structure of the basic ore are excluded (generally Chapter 28)."

…

"**26.14 – Titanium ores and concentrates.**

The principal ores generally classified in this heading are :

(c) Ilmenite (or titaniferous iron ore), iron titanite.

(d) Rutile, anatase and brookite, titanium oxides.

The heading excludes finely ground titanium ores for use as pigments (Chapter 32)."

15.2 From the perusal of the above Notes, it is amply clear that any change in the chemical composition or alteration of the crystallographic structure of the goods pertaining to CTH 2614 caused by any treatment other than calcining or roasting, are excluded from Chapter 26 and would thus fall under Chapter 28. The assessee has claimed before us that there has been a change in chemical composition and change in the molecular structure which is caused during chemical process of "Leaching" in the digesters and not during calcining or roasting. In its

support, they have furnished test reports of experts in the field which are not disputed or doubted by the Revenue.

15.3 On the other hand, the stand of the Revenue is only that the said change canvassed by the assessee occurred only during calcining/roasting. But we do not see any documentary evidence placed in support of this argument other than the website of Kerala Minerals. Other than this, nothing is placed on record to indicate as to in which context was the website found useful. Also, nothing is forthcoming as to investigation/analysis, if any, carried out by any concerned who uploaded in the website. Hence, the alleged reference also tantamount to mere allegation, without any basis or any stuff. For this reason, the same does not take anyone anywhere.

16.1 At this juncture, we find it appropriate to look at the test report dated 14.08.2014 of CSIR. For the sake of convenience, the same is reproduced hereinbelow: -

Sl. No.	**DCW Sample Code**	**Sample details**	**Minerals identified by XRD**	**Chemical formula of mineral present**	**Crystal structure of mineral present**	**XRD Reference Code**	**Remarks**
1.	1	Ilmenite Ore (54-55% TiO_2)	Ilmenite	$Fe(TiO_3)$	Hexagonal	92-010-5698	Annexure-1
			Hematite	Fe_2O_3	Rhombohedral	00-024-0072	
2.	2	Purified Ilmenite Ore after Magnetic Separator	Ilmenite	$Fe(TiO_3)$	Hexagonal	98-010-5698	Annexure-2
			Goethite	FeO(OH)	Orthorhombic	98-011-2688	
			Magnetite	Fe_3O_4	Cubic	98-002-8170	
			Hematite	Fe_2O_3	Rhombohedral	00-024-0072	
3.	3	Reduced Ilmenite Ore after Roasting	Ilmenite	$Fe(TiO_3)$	Hexagonal	98-010-5698	Annexure-3
			Goethite	FeO(OH)	Orthorhombic	98-011-2688	
			Iron Titanium Oxide	$Fe_{1.5}Ti_{0.5}O_3$	Hexagonal	98-004-8810	
			Hematite	Fe_2O_3	Rhombohedral	00-024-0072	
4.	4	Wet synthetic Rutile before Calcination	Rutile	TiO_2	Tetragonal	98-002-2144	Annexure-4
5.	5	Synthetic Rutile Final product (>93.00% TiO_2)	Rutile	TiO_2	Tetragonal	98-002-2144	Annexure-5

16.2 From the table, it is very clear that the Ilmenite Ore with the chemical formula $FeTiO_3$ is identified by its hexagonal crystal structure. What emerges as the final product, at serial number five, is the synthetic Rutile having more than 93% of TiO_2 with a tetragonal structure. The same is not issued merely based on visual inspection/description, but after carrying out scientific analysis/tests, which is evident from the attachments to such reports.

16.3 Report of Pondicherry University, Department of Earth Sciences, which is placed at page 72 of the appeal paper book, gives the summary as under: -

> "**Summary:**
>
> .
> .
> .
>
> The ilmenite crystal structure belongs to hexagonal crystal system while rutile crystal structure belongs to tetragonal crystal systems inferred from XRD analysis"

16.4 Report of BARC is also placed on record at page 86 of the paper book. Perusal of the table at the same page reveals the processes involved and the result in each stage, structure in each stage, with composition and resultant product:

			Results		Remarks
S. No.	DCW Code	ACD-Sample Code	*Structure (XRD Pattern)	**Composition (%) (Wet Chemical Method and XRF)	
1	Ilmenite purified ore (Opp outlet)	DCW-1	Ilmenite	Ti: 43.61±0.23 Fe: 53.80±0.20	See Annexure-1
2	Ilmenite Raw ore	DCW-2	Ilmenite	Ti: 44.46±0.24 Fe: 53.05±0.20	See Annexure-2
3	Reduced ore (Roaster outlet)	DCW-3	Ilmenite	Ti: 44.61±0.24 Fe: 52.79±0.20	See Annexure-3
4	Leached ore (Digester outlet)	DCW-4	Rutile	Ti: 95.98±0.40 Fe: 2.20±0.06	See Annexure-4
5	Synthetic Rutile (Calciner outlet) Finished product	DCW-5	Rutile	Ti: 95.98±0.40 Fe: 2.20±0.06	See Annexure-5

16.5 From the above, it is clear that Ilmenite got converted into synthetic Rutile due to the leaching process, bringing out chemical / structural changes.

17. It is relevant at this juncture to reproduce the whole process involved for converting raw Ilmenite Ore into synthetic Rutile, as explained by the assessee; the same is available in the record placed before us, which is part of the reply to the Show Cause Notice (reply dated 06.03.2013):-

> " *We purchase Ilmenite Ore falling under Chapter 2614 from M/s. Indian Rare Earths Limited and also import the same. We are manufacturing upgraded beneficiated ilmenite synthetic rutile TiO2 95% in our Factory since 1970 and exporting through Tuticorin Port by adopting the following manufacturing process.*
>
> *In the industrial process adopted by us, the raw ore is first reduced in rotary furnaces by subjecting it to roasting at a high temperature using coke breeze or coke fines as the reducing medium. The roasted ore is then charged to digestors, which are spherical autoclaves with special materials of construction for withstanding the highly corrosive condition. The ore and hydrochloric acid of 30-31% concentration are charged to the digestors and subjected to repeated leaching under high pressure and temperature. The leaching is continued till the iron content drops from 33-35% to 2.5%. The iron gets converted to ferric chloride. On completion of leaching, the beneficiated Ilmenite synthetic rutile is subjected to repeated water washing to remove the ferric chloride formed in the reaction and excess un-reacted acid. The synthetic rutile ilmenite slurry after blowing down of the supernatant liquor is transferred to slurry tanks for feeding to the next step of operation. The slurry contains about 30% -*

40% solids. The solids are separated from the slurry by vacuum filtration operation by which the moisture content is reduced to 20-25%. The wet cake is then dried in oil fired rotary dryers by direct contact of flue gas with cake reducing the moisture to 1.5 to 2% and the final product is obtained.

We herewith enclose the central excise registration issued to us in 1991 wherein it has classified our upgraded beneficiated ilmenite synthetic rutile only under chapter 2823 being a manufactured product (copy attached).

We also enclose copy of the shipping bills over the period of time whereby our upgraded beneficiated Ilmenite synthetic rutile has been classified under chapter 2823 in this custom house itself while allowing our exports. Sample copy of shipping bills since 1994 till date is attached for ready reference. (copy attached)

Further the Tuticorin Customs itself by test memo 6/2009-DEEC and 7/2009-DEEC had sought mineralogical report on upgraded beneficiated ilmenite-synthetic rutile and Buff colour titanium dioxide from the Mines Bureau. The Bureau of Mines, Bangalore by its report dt. 12.09.2009 had stated that the synthetic materials cannot be studied under the polarized microscope…..

…

…

Considering the facts that our upgraded beneficiated ilmenite synthetic rutile containing 95% titanium dioxide is a manufactured synthetic product and is not an ore as confirmed by the central excise registration and the customs lab report in the earlier instances.

Further, we would like to differentiate the two viz. Ilmenite in its raw form as such and our Synthetic Rutile. In case of Ilmenite which is rightly classifiable under 26140010, the composition of the material Ilmenite is Titanium with 54% + Iron and the balance with some other impurities. The composition of Titanium and Iron is such that it cannot be physically separated as it is a crystal structure. Unless we use a chemical process of leaching without which the product Titanium cannot be separated. In the case of Synthetic Rutile, the composition of the material is only Titanium with 95% + other permitted impurities which accounts for about 5%. Thus the two products are totally different from the points of its composition, its readiness to use for other final products.

Further, the ultimate manufacturer who would like to use only Titanium dioxide with 95% and not the Ilmenite. The two products are so different that one is not an alternative/or supplement to the other warranting both to classify under the same head. The user of the Synthetic rutile cannot use the Ilmenite as it has got Iron content of over 40% which is impossible for any Titanium manufacturer to use straight away for their purpose as in case of using Synthetic Rutile. Thus, it is impossible to bring both Ilmenite and Synthetic rutile under one category which we would like the department to take cognizance off."

18. In view of the above, we have no hesitation to hold that the scientific analysis carried out by the Government agencies like BARC/CSIR are clear and understandable and hence, the same prevails over the mere download from website of Kerala Minerals. It is the above Government agencies who have reported that the change in the

chemical composition/crystallographic structure from Raw Ilmenite ore and the final exported goods has happened during the chemical process of leaching. In view of this, the final product that emerges and which is exported is nothing but synthetic Rutile and not natural Rutile, not only because there is a structural change but also for the fact that such a change has occurred as a result of the leaching process. Further, only natural Rutile stands excluded from the heading CTH 2823 as per HSN and it remains classified under Chapter 26. In view of our above discussions and by applying the guidelines set out in the HSN/Explanatory notes as above, the goods in question i.e., synthetic Rutile can only be classified under CTH 2823.

19.1 In the order of learned Hyderabad Bench in the case of *M/s. Trimax Sands Pvt. Ltd. (supra),* it has been held as under:-

> *"19. We note that the grounds of appeal take a confused stand. The elaborate process described in the grounds of appeal obtained from the report of the jurisdictional Range Officer. It shows that the percentage of Ilmenite ore is raised from 6-7% to 96-97% of Ilmenite ore; yet the Department refers (Para 2.5 of grounds of appeal) to the processed goods as Ilmenite sand which 'cannot be considered as an ore'. Again, in Para 2.1 it is stated that the process leads to separation of Ilmenite ore.* ***Revenue is confusing the process of concentration of Ilmenite ore with the process of concentration of titanium dioxide which is contained in the ore. In fact, the concentrated titanium dioxide which is also referred to in trade as synthetic rutile, would not even fall under 2614 00 20. It would evidently fall under Chapter 28.*** *The Department's argument that upgraded Ilmenite under 2614 00 20 is nothing but synthetic rutile, is fallacious. We also note that in Para 3.5 it is mentioned that synthetic rutile is classified under rutile (2614 00 31). In the same Para 3.5 under sub-para (ii), it is stated that synthetic rutile will not be classified under 2614 00 31. Here again we find contradiction in the grounds of appeal. Assuming that the Department's argument is that only upgraded Ilmenite which is synthetic rutile is classifiable under 2614 00 20, the argument is self-defeating because rutile clearly falls under 2614 00 31, 2614 00 39 and 2614 00 90 in the tariff and no distinction is made between naturally*

occurring rutile and synthetic rutile in the Heading for Rutile."

(Emphasis supplied)

19.2 In the case of *M/s. C.S. Zircon Products Pvt. Ltd. (supra)*, the co-ordinate Delhi Bench has held as under: -

"3.1 After carefully considering the submissions of both the sides, we, for the reasons given below, are of the view that the product, in question, is correctly classifiable under Heading 28.25.

….

(3) As per HSN explanatory notes to Chapter 26 (page 214), "concentrates of ore obtained by treatments other than calcination or roasting, which alter the chemical composition a crystallographic structure of the basic ore are excluded from Chapter 26 and are covered by Chapter 28…..

…"

We find that the ratio in the above orders is squarely applicable to the case on hand to justify our conclusion that the goods in question could only be classified under Chapter Heading 2823.

19.3 We find that in the decision of *M/s. D.L. Steels (supra)*, the Hon'ble Supreme Court has held as under: -

"12. We would, at this stage, take on record the well-settled principle that words in a taxing statute must be construed in consonance with their commonly accepted meaning in the trade and their popular meaning. When a word is not explicitly defined, or there is ambiguity as to its meaning, it must be interpreted for the purpose of classification in the popular sense, which is the sense attributed to it by those people who are conversant with the subject matter that the statute is dealing with. This principle should commend to the authorities as it is a good fiscal policy not to put people in doubt or quandary about their tax liability. The common parlance test is an extension of the general principle of interpretation of statutes for deciphering the mind of the law-maker. However, the above rule is subject to certain exceptions, for example, when there is an artificial definition or special meaning attached to the word in a statute, then the ordinary sense approach would not be applicable.

.
.
.

25. In the context of the present case, once we accept the finding of fact recorded by the CESTAT that 'anardana' is a dried product of local 'daru' or wild pomegranate, which grows in mid hill conditions and which fruit in its fresh form is different from the pomegranate included in clause 7 to Heading 08.10, as this wild pomegranate is not consumed as a fresh fruit, the contention of the Revenue must fail. GRI-3, which in the absence of the Heading, Section or Chapter Notes, prescribes the order of priority as - (a) specific description, (b) essential character, and (c) the Heading that occurs last in numerical order, and even GRI-4 - the heading appropriate for the goods "to which they are most akin", supports our conclusion and finding. The submission of the Learned Counsel for the Respondent is ***correct that when the Revenue challenges the classification made by the assessees, the onus is on the Revenue to establish that the item in question falls in taxing category as claimed by them. The burden is on the Revenue to adduce proper evidence to show that the goods are classifiable under a different heading than that claimed by the assessee.*** *The finding of fact as recorded by CESTAT gets reinforced by the policy condition attached to the sub-heading 1209.99.00 of the Import Policy which specifically states - 'import of pomegranate seeds will be free'. Without any doubt, sub-heading 1209.99.00 in the Import Policy correlates to sub-heading 1209.99 to Chapter 12 of the HSN. The contention of the Revenue that the Import Policy is in the nature of delegated legislation albeit correct, would not make any difference in the context of the present case as the policy condition in the Export/Import Policy specifically includes pomegranate seeds - as 'anardana' under sub-heading 1209.99.00, whereas the Schedule to the Customs Tariff Act, 1975 merely reproduces the Heading and the sub-heading of the HSN, without specifically including or excluding pomegranate seeds under the sub-heading 1209.99."*

(Emphasis supplied)

Hence, when the Revenue disagrees with regard to a scientific fact, the reasonable expectation would be to subject the goods to a scientific analyses to arrive at a sensible conclusion, which is lacking in the case on hand. Hence, the reports of the experts in the field like CSIR, BARC are very much relevant.

19.4 Further, as rightly pointed out by the Ld. Advocate, we find that in the case of *M/s. V.V. Minerals (supra),* the issue was relating to processed and unprocessed Ilmenite ore and between Tariff item 2614 0010 and 2614 0020. Moreover, we do not find any reference to chemical processes being involved and nor any dependency on the resultant change in the chemical composition and crystallographic structure, as against the issue in the case on hand.

20.1 In the Order-in-Original dated 26.03.2013, the Assistant Commissioner has observed that the General Interpretative Rules (GIR) are to be applied whenever there arises any dispute or ambiguity in classification. (paragraph 6, page 5 of the Order-in-Original No. 575/2013 dated 26.03.2013)

20.2 At paragraph 3 of the said order, the original authority has recorded the submissions made on behalf of the exporter. Clauses (iv) and (v) reflect the regular/usual practice followed by the assessee for many years which was also accepted by the Revenue.

20.3 Surprisingly, the original authority, however, chooses to apply the GIR solely based on description of goods declared by the assessee. Even while doing so, he only refers to a part of the description, and it is not as though the words in between are silent or should not be read.

20.4 At paragraph 7 of the Order-in-Original, at sub-paragraphs (iii) and (iv), the adjudicating authority refers to the description, compares the same with Tariff Item 26140020, and conveniently ignores the words within the brackets "Synthetic Rutile". It is not as though the Revenue was not aware of the significance. The omission therefore, is clear, to rope-in under CTH 2614 since synthetic Rutiles are clearly classifiable under Chapter 28.

21. It is well known that classification depends on various factors including description, and not description per se. Assuming that the description is the only criterion, then the same should sync with the HSN. It is well settled that the core element of determinative factor has to be gone into which is the first and essential step. Whereas, the classification appears to have been made on incorrect assumptions, which is not as per law.

22.1 At paragraph 8 of the Order-in-Original, the adjudicating authority has extracted HSN Explanatory notes and at page 8 of the OIO, the following paragraph of the said note which is extracted, is relevant.

> *"Concentrates of ores obtained by treatments, other than calcining or roasting, which alter the chemical composition or crystallographic structure of the basic ore are excluded (generally Chapter 28). Also excluded are more or less pure products obtained by repeated physical changes (fractional crystallization, sublimation, etc., even if there has been no change in the chemical composition of the basic ore."*

From the above paragraph in the said Notes, we find that the same provides for an exception in the form of exclusion to the general applicability for a product to be classified under Chapter 26.

22.2 The adjudicating authority has reproduced what is perhaps downloaded from the website of Kerala Minerals & Metals Ltd. at pages 10 and 11 of the Order-in-Original. Various processes are also mentioned in the same page of the Order-in-Original. When we look at the 'Process Outline', it is found that at the stage of Roaster, Hydrochloric Acid is never used and it is mentioned that the reduced Ilmenite is cooled and sent to the digesters where it is leached with 18 to 20% Hydrochloric Acid. Then, there is also a reference to digester and thereafter, it is mentioned as under: -

Ilmenite Beneficiation Plant

The Ilmenite Beneficiation Plant is designed and installed based on the BCA Cyclic Process Technology supplied by M/s Benilite Corporation of America. The Plant is in a single stream and is subdivided into six major sections, based on operation:

- Raw Material and Reductant handling
- Roasting and Cooling
- Digestion and Filtration
- Calcination and Cooling
- Acidic Liquor Treatment
- Tank Farm

Process Outline:

- The raw Ilmenite (RI) containing 58-60% Titanium Di-oxide is beneficiated to 90% Titanium Di-oxide content.
- The beneficiated Ilmenite (BI) is the raw material for the Pigment Production Plant
- The ferric oxide in the RI is subjected to high temperature in Roaster. The Fe_2O_3 is reduced to leachable FEO form

Roaster

$C + CO_2 = 2CO$
$2C + O_2 = 2CO$
$Fe_2O_3 + C = 2FeO$
$Fe_2O_3 + C = 2FeO + CO$

- The reduced Ilmenite (Rel) is then cooled and sent to digesters where it is leached with 18-20% Hydrochloric acid.

Digester

$TiO_2 + HCl + FeO = TiO_2 + FeCl_2 + HCl$
$TiO_2 + 6HCl + Fe_2O_3 = TiO_2 + 2FeCl_3 + 3H_2O$

- The spent leach liquor is sent to storage tanks. The leached Ilmenite after washing and filtering is calcined to get beneficiated Ilmenite.

23. What is conspicuously absent is the specific observation as to when the chemical or crystallographic change occurs and what is the molecular structure at each stage of the processes that are mentioned in the said page. Hence, this download from website may not be of much relevance, especially when compared to the reports of Government agencies.

24.1 It may not be out of context to mention that it is for the authorities to properly look into the description of goods and then classify the same on its merits, if the description is the sole criterion. Further, they should not go

with the classification in the statute first and then fit-in the goods under the said classification to suit their convenience. Because, the role of officers is clearly to adjudicate/assess.

24.2 In the Order-in-Original, the adjudicating authority has placed on record his own analogy, but unfortunately what is relevant is the supporting evidence. It is also the well settled position of law that even the strongest allegations or assumptions cannot take the place of proof. This case involves scientific facts which decide the classification and hence, it is most appropriate that evidence in the form of opinion of experts, as per Section 45 of the Indian Evidence Act, is relied upon, instead of reproducing own ideas. It is not as though opinion of an expert is final piece of evidence, unless and until such opinion is held to be not based upon specific standards and regulatory guidelines notified and followed in the fields of Science, Arts or Technology.

25. We have to understand that the classification adopted by the assessee here is not on mere assumptions, they have been doing so, as admittedly for more than three decades. When the dispute started, they apparently approached other Government organisations like BARC and CSIR, whose reports are also placed on record. There is no doubt that these organisations have given the reports based on their scientific analysis for which they are well known, and hence, unless an effort is made to obtain contrary reports from similarly placed Government agencies and place on record, these reports of BARC and CSIR need to be accepted and acted upon.

26.1 At paragraph 15, page 12 of the Order-in-Original, the adjudicating authority refers to the amendment in 2005, thereafter places on record that a speaking order was issued on 31.12.2012 by classifying the goods under 2614. There is also a reference that in 2009, there was uncertainty, consequent to which samples were drawn and

the goods were allowed to be cleared by classifying under Chapter 28 after execution of an undertaking; and no final decision has been taken. That means, despite the change in 2005, and from 2005 to 2009, the classification under Chapter 28 was never disputed. Even after this 'small-time' dispute in 2009, the classification remained not disputed until 2012/13.

26.2 Even in 2009, although apparently a dispute was made, yet as admitted by the original authority himself, no final decision has been taken and perhaps the stalemate continues till date. When the Revenue does not act, that should not be allowed to be causing undue hardship to *bona fide* assessees. The results are glaring, long drawn multiple disputes.

27. Further, we find from the impugned Orders-in-Appeal that the assessee has been manufacturing/exporting the very same product from 1986 by declaring/classifying the same under Chapter Heading 2823, both for their export and domestic clearances. This only establishes that the assessee has been consistent, which was not disputed at all by the Revenue for more than 30 years and hence, to deviate from the practice in place for more than three decades, the Revenue has to come up with formidable defence to break the forte. But unfortunately, there has only been a half-hearted attempt, without any supporting evidence, whatsoever.

28.1 In the Order-in-Appeal dated 23.08.2013, we find that the Commissioner (Appeals) has nowhere referred to the reports/certificates issued by CSIR or BARC. Though reference is made to the report from Bureau of Mines, Bangalore but however there is no discussion on this either, in the impugned order. Moreover, the first appellate authority has chosen to refer to part of the description as declared by the assessee in the export documents.

28.2 It is well understood that the description is not the deciding factor, especially in an issue relating to classification, that too when a part of the description of the export product is considered for deciding the classification. The description of the export product is "Upgraded Beneficiated Ilmenite (Synthetic Rutile) TiO_2 95% Min. Moisture 0.5% Max." The lower adjudicating authority appears to be considering only "Upgraded Ilmenite" for the purpose of classification. Moreover, the departmental guidelines in the form of CTH or Explanatory Notes / HSN clearly does not classify goods just based on the description. If description was sufficient, then there was no need to specify that those which undergo structural change after the process will fall under different classification. All such similar goods could have been just placed / classified under a single CTH.

28.3 Therefore, one has to understand the purpose behind each such classification vis-à-vis the respective HSN classification & the Explanatory notes.

29.1 In respect of the other appeal, the first appellate authority has considered the views of experts in the field who have certified or opined that there has been various chemical processes which has resulted in the final product, with a different molecular structure. There is also an observation that the chemical and crystallographic structure of change has occurred only after the process of leaching.

29.2 There is also an observation by the first appellate authority, after looking into the records, that the assessee had exported Buff Color Titanium Dioxide, Rutile grade (Isotox) through shipping bill dated 05.04.2012, which was classified by the Department under Chapter 28, thereby allowing drawback. Admittedly, the impurity content was much higher, as could be seen from paragraph 3 of the Order-in-Appeal dated 17.05.2013.

29.3 Against this, the same Department has sought to reclassify under Chapter 26, even though the product in question had lesser impurity. There is also a categorical observation by the first appellate authority that the lower authority did not bring on record any chemical test report of the impugned goods to justify its classification under CTH 2614.

30. In view of above discussions, we are of the view that the goods in question are synthetic Rutile which merit classification only under CTH 2823 and hence, the stand of the assessee is accepted.

31. Consequently, the change sought to be made by the Revenue is not accepted, for which reason, we uphold the order of the first appellate authority vide Order-in-Appeal No. 47/2013 (TTN) dated 17.05.2013 and dismiss the appeal filed by the Revenue.

32. Further, for the very same reasons, the impugned Order-in-Appeal Nos. 160 to 180/2013 (TTN) dated 23.08.2013 is set aside and the appeals filed by the assessee are allowed with consequential relief, as per the law.

(Order pronounced in the open court on **28.06.2023**)

Sd/-
(VASA SESHAGIRI RAO)
MEMBER (TECHNICAL)

Sd/-
(P. DINESHA)
MEMBER (JUDICIAL)

Sdd