

SUPREME COURT OF ARIZONA  
En Banc

STATE OF ARIZONA ex rel. THE ) Arizona Supreme Court  
ARIZONA DEPARTMENT OF REVENUE, ) No. CV-03-0250-PR  
)  
Plaintiff-Appellant, ) Court of Appeals  
) Division One  
v. ) Nos. 1 CA-TX 01-0007  
) 1 CA-TX 02-0014  
CAPITOL CASTINGS, INC., ) (Consolidated)  
)  
Defendant-Appellee. ) Arizona Tax Court  
\_\_\_\_\_) Nos. TX 1996-00028  
) TX 1996-00028-3  
)  
STATE OF ARIZONA ex rel. THE )  
ARIZONA DEPARTMENT OF REVENUE, )  
)  
Plaintiff-Appellee, ) **O P I N I O N**  
)  
v. )  
)  
CAPITOL CASTINGS, INC., )  
)  
Defendant-Appellant. )  
\_\_\_\_\_) )

Appeal from the Arizona Tax Court  
The Honorable Jeffrey S. Cates, Judge  
The Honorable Paul A. Katz, Judge

**REVERSED AND REMANDED**

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Opinion of the Court of Appeals, Division One  
205 Ariz. 258, 69 P.3d 29 (App. 2003)

**VACATED**

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**B E R C H**, Justice

¶1 Arizona law exempts from use tax any “[m]achinery[] or equipment[] used directly in manufacturing, processing, fabricating, . . . or metallurgical operations.” Ariz. Rev. Stat. (“A.R.S.”) § 42-5159(B)(1) (Supp. 2003).<sup>1</sup> Capitol Castings claimed that several items purchased for use in its foundry facilities qualified for the use tax exemption. The court of appeals, however, concluded that the items did not qualify for the exemption because they were not “machinery or equipment.” See *State ex rel. Ariz. Dep’t of Revenue v. Capitol Castings, Inc.*, 205 Ariz. 258, 266, ¶¶ 34, 36, 69 P.3d 29, 37 (2003) (“*Capitol II*”). We granted Capitol Castings’ petition for review and, for the reasons set forth, vacate the opinion of the court of appeals, resolve the exemption status of several items, and remand the case for further proceedings.

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<sup>1</sup> The legislature renumbered § 42-1409(B)(1) as § 42-5159(B)(1) in 1997, see 1997 Ariz. Sess. Laws, ch. 150, §§ 107, 110, but made no substantive change to its language. Because there was no substantive change, this opinion refers to the current citation.

## BACKGROUND AND PROCEDURAL HISTORY

¶2 Capitol Castings manufactured grinding balls and custom-cast items used in mining and other industries.<sup>2</sup> Manufacturing these items entailed pouring molten metals and alloys into molds to form the desired shapes. Capitol constructed its molds using metal, silica sand, chemical binders, exothermic sleeves, mold cores, mold wash, and hot topping.

¶3 The molds for custom castings consisted almost entirely of sand. For some of the custom molds, Capitol would ram the sand for each half of the mold into a steel flat containing a wood pattern of the desired shape. For other custom molds, Capitol would pour sand treated with chemical binders over wood patterns. The binders helped the sand retain its form. Capitol would then insert into one of the custom casting mold's halves an exothermic sleeve, a round tube that protruded from the mold like an exhaust pipe and retained excess molten metal that became part of the casting as the metal inside cooled and contracted. Capitol used "hot topping," a powder, to cover the end of the exothermic sleeve to keep the molten metal in the sleeve from cooling. After removing the wood patterns from the molds, Capitol sprayed the cavity left by the pattern

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<sup>2</sup> Capitol no longer owns the foundry facilities discussed in this opinion.

in the mold with a mold wash to prevent the sand from sticking to the casting. Capitol sometimes used mold cores, also made of sand, to form cavities in the molds. Once the halves of each custom casting mold were complete, Capitol put the halves together to form a single mold.

¶4 Capitol's molds were destroyed during the manufacturing process. The chemical binder and mold wash were completely consumed and the exothermic sleeves and hot topping were rendered unusable each time Capitol used a mold, but Capitol was able to salvage the metal and sand for use in future molds.

¶5 The Arizona Department of Revenue ("ADOR") did not contest the exemption for the metal molds, thus impliedly conceding that the metal molds are exempt from use tax, but it contends that the other materials - silica sand, chemical binders, hot topping, mold wash, mold cores, and exothermic sleeves - are not exempt.

¶6 ADOR also contests the exemption for the cement and lime Capitol used at its Chandler facility to detoxify dust created by the arc furnaces used in the casting process. Like the chemical binders and hot topping, the cement and lime could not be reused after they were injected into the toxic dust.

¶7 Finally, ADOR contests the exemption for refractory materials, such as coxy sand and cerwool blankets, used to

protect Capitol's machinery and equipment from the extreme heat generated by its manufacturing processes. The manufacturing process destroyed the refractory materials, requiring Capitol to replace them periodically.

¶8 This case has an extensive procedural history, including two tax court proceedings, two published court of appeals opinions, and a legislative amendment to the exclusions from the exemptions afforded by A.R.S. § 42-5159(B). We will explain the history as it becomes pertinent to the analysis.

## DISCUSSION

### A. Standard of Review

¶9 This case involves the interpretation of statutory provisions, matters that we review de novo. See *Bilke v. State*, \_\_\_ Ariz. \_\_\_, \_\_\_, ¶ 11, 80 P.3d 269, 271 (2003) (citing *Canon Sch. Dist. No. 50 v. W.E.S. Constr. Co.*, 177 Ariz. 526, 529, 869 P.2d 500, 503 (1994)). When interpreting statutes, we strive to "discern and give effect to legislative intent." *People's Choice TV Corp. v. City of Tucson*, 202 Ariz. 401, 403, ¶ 7, 46 P.3d 412, 414 (2002). We "construe the statute as a whole, and consider its context, language, subject matter, historical background, effects and consequences, [as well as] its spirit and purpose." *Id.* (quoting *State ex rel. Ariz. Dep't of Revenue v. Phoenix Lodge No. 708, Loyal Order of Moose, Inc.*, 187 Ariz. 242, 247, 928 P.2d 666, 671 (App. 1996)).

¶10 In the tax field, we liberally construe statutes imposing taxes in favor of taxpayers and against the government, *Ariz. Tax Comm'n v. Dairy & Consumers Co-op Ass'n*, 70 Ariz. 7, 18, 215 P.2d 235, 242-43 (1950), but strictly construe tax exemptions because they violate the policy that all taxpayers should share the common burden of taxation. See *Tucson Transit Auth., Inc. v. Nelson*, 107 Ariz. 246, 252, 485 P.2d 816, 822 (1971); 71 Am. Jur. 2d *State and Local Taxation* §§ 232, 233 (2001). Nevertheless, an exemption should "not be so strictly construed as to defeat or destroy the [legislative] intent and purpose."<sup>3</sup> W.E. Shipley, Annotation, *Items or Materials Exempt from Use Tax as Used in Manufacturing, Processing, or the Like*, 30 A.L.R.2d 1439, 1442 (1953). Bearing these principles in mind, we turn to the issue raised by the parties.

#### **B. Machinery or Equipment**

¶11 Our analysis begins with the text of A.R.S. § 42-5159(B)(1), which exempts "[m]achinery, or equipment, used directly in manufacturing, processing, fabricating, job printing, refining or metallurgical operations." The statute

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<sup>3</sup> Citing *People's Choice TV Corp.*, 202 Ariz. at 403, ¶ 7, 46 P.3d at 414, Capitol argues that we should construe the exemption at issue in this case liberally. As the court of appeals below correctly pointed out, *People's Choice TV Corp.* interpreted a statute prohibiting the imposition of a tax, not a provision exempting an otherwise taxable item. See *Capitol II*, 205 Ariz. at 263-64, ¶ 23, 69 P.3d at 34-35. Capitol's reliance on *People's Choice TV Corp.* is therefore misplaced.

requires that the "terms 'manufacturing,' 'processing,' 'fabricating,' 'job printing,' 'refining' and 'metallurgical'" be interpreted to include "those operations commonly understood within their ordinary meaning." *Id.* No one disputes that Capitol's casting processes were of the type contemplated by the statute.

¶12 The statute does not define the terms "machinery or equipment." Generally accepted definitions of "machinery" indicate that it may be "an assemblage of machines," "the parts of a machine collectively," or "a system by which action is maintained or by which some result is obtained." Webster's College Dictionary 788 (2d ed. 1997). The definition includes "an apparatus consisting of interrelated parts with separate functions, used in the performance of some kind of work," or "a device that transmits or modifies force or motion." *Id.* at 787. "Equipment" includes "the articles, implements, etc., used or needed for a specific purpose or activity." *Id.* at 442.

¶13 Despite the lack of definitional specificity in the statute, there is no dispute about its underlying purpose. The legislature enacted A.R.S. § 42-5159(B)(1) to stimulate business investment in Arizona in order to improve the state's economy and increase revenue from other taxes, such as income and property taxes. See *Ariz. Dep't of Revenue v. Blue Line Distrib., Inc.*, 202 Ariz. 266, 268, ¶ 11, 43 P.3d 214, 216 (App.

2002) (describing the policy supporting the “machinery or equipment” exemption from the transaction privilege tax and citing 71 Am. Jur. 2d *State and Local Taxation* § 288 (2001)); *Duval Sierrita Corp. v. Ariz. Dep’t of Revenue*, 116 Ariz. 200, 204, 568 P.2d 1098, 2002 (App. 1977) (same). Our interpretation of the statute therefore should further, not frustrate, the policy of encouraging investment and spurring economic development.

¶14 Although the text of the statute may not clearly reveal the legislature’s intent, the procedural history of this case provides significant evidence of the legislature’s intended definition and its purpose in exempting machinery and equipment used in industrial processes from the use tax. In *Arizona Department of Revenue v. Capitol Castings, Inc.*, 193 Ariz. 89, 970 P.2d 443 (App. 1998) (“*Capitol I*”), which addressed the issue presented in this case before the legislature amended § 41-5159(C)(1), the court of appeals held that the items at issue did not qualify for the use tax exemption afforded by § 42-5159(B)(1) because they were expended or consumed in the production process. *Id.* at 95, ¶ 26, 970 P.2d at 449. The court also found that the items at issue did not qualify as machinery or equipment, but determined that this conclusion was “moot” in light of its holding that the items fell within § 42-5159(C)(1), which excluded “expendable materials” from the use

tax exemption contained in § 42-5159(B)(1). *Id.* at 93-95, ¶¶ 14-26, 970 P.2d at 447-49.

¶15 In the course of its “machinery or equipment” discussion, the court overruled the tax court’s opinion in *Arizona Department of Revenue v. Cyprus Sierrita Corp.*, 177 Ariz. 301, 303, 867 P.2d 871, 873 (Tax 1994) (“*Cyprus Sierrita*”), which had held that chemicals expended during the ore leaching process nonetheless qualified as “machinery or equipment” for purposes of the exemption because they functioned as machinery might in an ore leaching process and they were “an integral part of a complicated process.” The court of appeals also distinguished its own opinion in *Duval Sierrita Corp. v. Arizona Department of Revenue*, 116 Ariz. 200, 568 P.2d 1098 (App. 1977), which had adopted two tests – the ultimate function and integrated rule tests – for determining whether items were machinery or equipment “used directly” in qualifying operations under § 42-5159(B)(1).

¶16 In response to *Capitol I*, the legislature amended § 42-5159(C)(1), which excludes expendable materials from the (B)(1) use tax exemption, to provide that “expendable materials do not include any of the categories of tangible personal property specified in subsection B of [§ 42-5159] regardless of the cost or useful life of that property.” See 1999 Ariz. Sess. Laws, ch. 153, § 2 (emphasis added). The amendment plainly was

designed to avoid the interpretation given to the prior version of subsection (C)(1) in *Capitol I*. As evidenced by the parties' arguments, however, there remains a question whether the amendment of the (C)(1) exclusion also affects the analysis in *Capitol I* of § 42-5159(B)(1), the provision exempting certain machinery or equipment from the use tax. In *Capitol II*, the court of appeals held that the amendment did not affect the machinery or equipment analysis under subsection (B)(1). 205 Ariz. at 266, ¶ 33, 69 P.3d at 37.

¶17 The court of appeals reasoned in *Capitol II* that its opinion in *Capitol I* contained two parts: one that "rejected the broad interpretation of 'machinery or equipment,'" *id.* at 264, ¶ 24, 69 P.3d at 35, and a second that analyzed whether the materials at issue were expendable. *Id.* ¶ 25. The court concluded that the 1999 amendment affected only the expendable materials discussion in *Capitol I*, but did not affect its discussion of what constitutes machinery or equipment. *Id.* at 265-66, ¶¶ 29-34, 69 P.3d at 36-37. We disagree and conclude that this narrow interpretation of the legislative amendment fails to give full effect to the legislature's intent.

¶18 Several factors demonstrate that, in amending A.R.S. § 42-5159(C)(1), the legislature meant to alter the specific result reached by the court of appeals in *Capitol I*, not just the conclusion that the materials at issue were expendable and

therefore excluded from the exemption. First is the language of the amendment itself. The conclusion in *Capitol I* that the items at issue did not qualify as machinery or equipment was ultimately grounded on the fact that the items were expended in the casting process. 193 Ariz. at 95, ¶ 26, 970 P.2d at 449 (describing the question whether the items qualified as machinery or equipment as “moot” in light of their expendability). The legislature then promptly removed an item’s expendability as an impediment to qualification for the use tax exemption, thus making plain that expendable materials can function as machinery or equipment.

¶19 Second, the legislative history of the amendment reveals that the legislature meant to change the result of *Capitol I*. Minutes of Senate Committee on Finance, 44th Leg., 1st Reg. Sess. (Feb. 22, 1999) (discussing the case law addressing the exemption for machinery or equipment and the exclusion for expendable materials); Senate Fact Sheet for H.B. 2395, 44th Leg., 1st Reg. Sess. (Feb. 18, 1999) (same); Minutes of House of Representatives Committee on Ways and Means, 44th Leg., 1st Reg. Sess. (Jan. 26, 1999) (same); House of Representatives Abstract for H.B. 2395, 44th Leg., 1st Reg. Sess. (1999) (same). We are therefore reluctant to read the amendment as leaving unaltered the ultimate result in *Capitol I*.

¶20 Finally, the legislature made the amendment

retroactive to May 19, 1977, see 1999 Ariz. Sess. Laws, ch. 153, § 3(A), the same day the court of appeals issued its opinion in *Duval Sierrita*, which had applied broader, function-based tests to determine whether items used in mining processes were exempt from use tax – an opinion distinguished in *Capitol I*. See 193 Ariz. at 94-95, ¶¶ 21-25, 970 P.2d at 448-49. The unusual retroactive effective date suggests three things. First, it implies that the legislature intended to return the interpretation of the statute to its pre-*Capitol I* status. Second, because *Duval Sierrita* addressed only the § 42-5159(B)(1) exemption, not the (C)(1) exclusion that was the subject of the amendment, the retroactive date also shows the legislature's intent that the (C)(1) exclusion be construed to act upon the definitions in subsection (B)(1) in a functional way, exempting from the use tax items that would qualify under (B)(1) even if they are expended in the manufacturing or fabricating process. Finally, the effective date suggests the legislature's approval of the "ultimate function" and "integrated rule" tests used in *Duval Sierrita* for determining whether items should be exempt from use tax under § 42-5159(B)(1).

¶21 Although the items for which exemption was sought in *Duval Sierrita* differ from those at issue in this case, the approaches developed in that case provide a useful framework for

analyzing whether an item is exempt under § 42-5159(B)(1). In *Duval Sierrita*, the court addressed whether two types of property qualified for the § 42-5159(B)(1) use tax exemption: (1) spare or replacement parts for items conceded to be machinery or equipment, 116 Ariz. at 203, 568 P.2d at 1101, and (2) water booster pumps and steel water pipes used in Duval Sierrita's mining operations, *id.* at 202, 568 P.2d at 1100. The answers to both questions turned on the statutory requirement that the machinery or equipment be "used directly" in the qualifying operations. *Id.* at 203, 568 P.2d at 1101. The court concluded that rather than view each item at a fixed point in time, without reference to its function, it should apply the "ultimate function" test: that is, it should examine how the item functions in the industrial process at issue to see whether the item qualifies for the § 42-5159(B)(1) exemption. *Id.* at 204, 568 P.2d at 1102. For the specific items already in service, the court adopted an "integrated approach" that addresses how the item is used in the industrial processes described in A.R.S. § 42-5159(B)(1) and considers the item's necessity to the process. *Id.* at 205, 568 P.2d at 1103. The integrated approach exempts only those items that are "essential to [the] operation and which make it an integrated system." *Id.* at 206, 568 P.2d at 1104. The *Duval Sierrita* approaches allow some items that would not ordinarily be considered "machinery"

or "equipment" to qualify for the § 42-5159(B)(1) exemption if they function as a necessary part of an integrated process. Such a result furthers the legislative goal of encouraging investment and spurring economic development.

¶22 While § 42-5159(B)(1), by its terms, applies only to "machinery" or "equipment" that is "used directly in manufacturing . . . operations," *Duval Sierrita* clarifies that whether an item qualifies as "machinery or equipment" must be considered in light of the second element of the exemption, that it be "used directly" in a manufacturing or other qualifying process. For example, a computer used in a business is "machinery" or "equipment." A computer used purely for administrative purposes, however, may not qualify for the exemption because it is not "used directly in manufacturing . . . operations." But if the computer is used to manage and control specific tasks conducted on an automated assembly line, the computer may well qualify for the exemption as it is "used directly in manufacturing . . . operations." Similarly, certain items not traditionally considered to be machinery or equipment may qualify as such depending on their function in the process. For example, in *Cyprus Sierrita*, the tax court found that three chemicals, "sulfuric acid, LIX, and Orfom 7," qualified as machinery or equipment. 177 Ariz. at 302, 304, 867 P.2d at 872, 874. Although the chemicals did not fall within the commonly

held notions of machinery or equipment, the court found that they functioned as such in the processes of extracting copper from ore. Because the chemicals functioned like items traditionally thought to be machinery or equipment, they were exempt from use tax. *Id.* at 304, 867 P.2d at 874.

¶23 As these examples show, a functional approach requires consideration of both of the exemption's elements, as neither element standing alone may be dispositive. By embracing *Duval Sierrita* and its ultimate function and integrated rule tests, the legislature expressed its intent to extend the exemption for machinery or equipment beyond the narrow confines created by *Capitol I*.

¶24 From this evidence, we conclude that the 1999 amendment was specifically intended to overrule *Capitol I* and to reinstate the *Duval Sierrita* tests. Thus, in analyzing whether an item is exempt from use tax under § 42-5159(B)(1), a court should consider a number of factors to determine whether the item qualifies as "[m]achinery, or equipment, used directly in manufacturing . . . operations." First, a court must apply flexible and commonly used definitions of machinery and equipment within the relevant industry. See *supra* ¶ 12. In determining whether the items at issue here were machinery or equipment, the court of appeals in *Capitol I* relied upon the concept of "fixed assets," which it defined as "physical

resources" such as "machinery or tools" other than land and buildings. 193 Ariz. at 94, ¶ 19, 970 P.2d at 448. The court in *Capitol II* relied upon the definition set forth in *Capitol I*, finding no legislative intent to change it in the 1999 amendment to § 42-5159(C)(1). 205 Ariz. at 266, ¶ 32, 69 P.3d at 37. In light of the legislature's implicit approval of *Duval Sierrita's* broader, more flexible approach, however, we find the analogy to "fixed assets" too narrow and therefore unhelpful in determining what constitutes machinery or equipment, especially in light of the legislature's disavowal of "cost or useful life" in the expendable materials exclusion from the exemption. See A.R.S. § 42-5159(C)(1). Applying the more expansive definition of machinery or equipment better serves the legislative goal than does applying accounting terminology used for balance sheet and income statement purposes.

¶25 Next, bearing in mind these flexible definitions, a court should examine the nature of the item and its role in the operations. Items essential or necessary to the completion of the finished product are more likely to be exempt. See *Duval Sierrita*, 116 Ariz. at 205-07, 568 P.2d at 1103-05. The prominence of an item's role in maintaining a harmonious "integrated synchronized system" with the indisputably exempt items will also directly correlate with the likelihood that the

exemption applies.<sup>4</sup> *Id.* at 205, 568 P.2d at 1103. The closer the nexus between the item at issue and the process of converting raw materials into finished products, the more likely the item will be exempt. As part of its analysis, the court should consider whether the item physically touches the raw materials or work in process, whether the item manipulates or affects the raw materials or work in process, or whether the item adds value to the raw materials or work in process as opposed to simply reducing costs or relating to post-production activities. In an environment such as Capitol's, for example, a furnace that melts scrap metal into a molten form would be essential or necessary to enable the scrap metal to be shaped into grinding balls or custom castings. The furnace also affects and manipulates the scrap metal when it melts the raw material into the desired cast shapes. Finally, by transforming the scrap metal into a molten metal that can be shaped into usable forms, the furnace increases the value of the scrap metal. Throughout its analysis, a court must bear in mind that the goal of the exemption - promoting economic development - must

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<sup>4</sup> ADOR's failure to challenge the exemption for the metal components of the molds suggests that both the metal and the sand used in the grinding ball molds should qualify for the exemption, because both the metal and sand components seem to have performed the same functions. In an "integrated synchronized system," it does not seem logical that two items performing the same function, but composed of different materials, should be treated differently for purposes of the exemption afforded by § 42-5159(B)(1).

not be frustrated by too narrow an application of § 41-5159(B).<sup>5</sup>

¶26 Applying these tests to the items at issue in this case, we conclude that the silica sand, chemical binders, exothermic sleeves, mold cores, mold wash, and hot topping qualify for the exemption because they were used directly in and were an integral part of a qualifying process under A.R.S. § 42-5159(B)(1). The items functioned the way machinery or equipment might in an integrated, synchronized system within the industry. All had a close nexus to the process as they directly touched the raw materials in the process of converting them into the finished product. The cement and lime, on the other hand, appear to have served the ancillary purpose of pollution control and therefore were not as integrally related to the process. We conclude, therefore, that the cement and lime do not qualify for the exemption.

¶27 The record is less clear with respect to the coxy sand and cerwool blankets that were used as refractory materials. We remand to the tax court to determine whether these items qualify for exemption pursuant to A.R.S. § 42-5159(B)(1).

#### CONCLUSION

¶28 We conclude that the court of appeals interpreted the

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<sup>5</sup> ADOR's concession that the molds would have qualified as machinery or equipment had Capitol purchased them preassembled, but not if Capitol assembled the molds itself, frustrates the legislative goal of the exemption and fails to apply *Duval Sierrita's* ultimate function test.

amendment to A.R.S. § 42-5159(C)(1) too narrowly and the tax court similarly erred in its analysis in this case. We vacate the opinion of the court of appeals, reverse the decision of the tax court, and remand the case to the tax court for entry of judgment as to the decided issues and for further proceedings consistent with this opinion.

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Rebecca White Berch, Justice

CONCURRING:

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Charles E. Jones, Chief Justice

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Ruth V. McGregor, Vice Chief Justice

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Michael D. Ryan, Justice

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Andrew D. Hurwitz, Justice