Metal Tools in Unpublished Cuneiform Texts from Early Dynastic Period

Prof. Dr. Munther Ali Abdul Malik
University of Baghdad
College of Arts

Researcher: Israa Saad Salih
Department of Archaeology

Abstract:
The people in ancient Mesopotamia know many minerals (Metal Tools), and they also know how to manufacture it and used them. Minerals have entered in many of their businesses and industries, even in the field of producing artworks (artifacts). Pots and agricultural tools as well as weapons they used in everyday life.

The most important of these metals are: gold, silver, copper, and tin, which some of them entered in the work of bronze bullion (Al-Jader, 1991, p.225).

The ancient Mesopotamians struggled to get the materials, they were carrying the tired journeys in order to bring the raw materials from far away counties, among them were Dilmun, Magan, Meluhha, Egypt, and Anatolia (Levy, 1986, p.19).

So we did not care about the all kinds of minerals, but we define our works about one type of this metals, which is a copper metal. So the copper regarded the first mineral which known to the people of ancient Mesopotamia, they used it very much in their lives, this had been a major turning point in the history of their civilization (Louis, 2008, p.112).

Key words: Mesopotamia, copper, trade, pots.

Introduction:
Copper is mentioned in the Sumerian language as (URUDU) and in Akkadian language as (erû) (CAD, E, p.321). Copper had been widely used for its ease manufacture and methods, so the cuneiform texts mentioned many types of copper as (heavy, crushed, cast, raw copper, medium quality or pure and oxidizer).

That the first used of copper in ancient Mesopotamia for the first time was synchronized with the manufacture of agricultural tools as (sickle, dagger, knife) and as a weapons also as (arrow heads, and spires or bayonets).

It seems that the used of copper in its natural form was in ways without heating, the process of fusion had been known since Jamdat Nasir period about (3000-2800 BC.), so the merchants were bringing it from Magan, Dilmun, and Anatolia (Potts, 2006, p.25).

What matters to us here is that the copper appeared in many unpublished cuneiform texts, which kept in Iraqi Museum, all of
them related to sale and purchased of many copper pots and from different types, as we see below:

Read and translation of cuneiform texts:

No. 1
IM-104647
Mes. = 2.8 x 2.6 x 2 cm.
Obv.
1- 1 uruduḫa-[zi]
    šubur-tur
Rev.
    iti 6
    4 mu
Translation:
1- One copper vessel (pot), from the type of hazi.
2- (to) Šubur-tur
3- The sixth month
4- The fourth year.
Commentary:
1- URUDU: as a symbol sign referred to copper or anything made from copper, this synonymous in Akkadian as (erû) \(^{(1)}\).
2- ḫa-[zi]: A Sumerian word refer to (copper tool) in general, and if the writer of this text intended to write it as (ḫa-zi-in) may be this mean (a cooper ax), this synonymous in Akkadian as (ḫassinnu), it is considered as a very important tool, which that have been used since early times, especially in the furniture industry and other works. Also appeared in different sizes as (blade with one edge, or with two edges).
3- iti: A Sumerian word refer to (month) in general, this synonymous in Akkadian as (warhum) (Sum.L., p.130; CAD, A/2, p.259 a)
4- mu: A Sumerian word refer to (year) in general, this synonymous in Akkadian as (šattum) (Labat, MDA, p.63; CAD, Š/2, p.197, a.).

No. 2
IM-204612
Mes. = 3.2 x 3.2 x 1.8 cm.
Obv.
Col. I
1- 1 uruduḫa-zi
    nam-ti
Col. II
lugal-giš-lu₂-ni ?
    mu-[na]-da ?
Rev.
Translation :
1- One copper vessel (pot) , from the type of *hazi*.
2- (from) Nam-ti
3- (to) Lugal-giš-lu₂-ni
4- To added
5- The fourth year.
6- The sixth month.

Commentary :
1 - *mu-[na]-da* : A Sumerian verbal form, which mean (to added) as follow : (*mu*-) a tool for verbal sentence in Sumerian language, (-*na*) it’s an infix for past tense, (-*da*) is the Sumerian root for (add, or to add) and also mean as (with or beside), this synonymous in Akkadian as (*itti*) (Labat, MDA, p.155 ; CDA, p.136-137).

**No. 3**
**IM- 204587**
Mes. = 4.3 x 4.3 x 2.6 cm.

Obv.
Col. I
1- 1 *urudu* a₂-gar
   1 *urudu* ḫa-zi  nagar

Col. II
2  *urudu* ḫa-zi  tur-tur
   edin-si
5-  *gub₃*-abzu

Rev.
   *itti* 6
   4 *mu*

Translation :
1- One copper vessel (pot), from the type of (*a₂-gar*)
2- One copper vessel (pot), from the type of (*hazi*) to carpenter.
3- Two copper vessel (pot), to (Tur-tur)
4- (from) Edin-si
5- (to) *gub₃*-abzu
6- The sixth month
7- The fourth year.

Commentary :
1 - Nagāru : A Sumerian word refer to a job (carpenter) in general, this synonymous in Akkadian as (*nagāru*) (Labat, MDA, p.231, no.560), the carpenter was like the rest of the craftsmen works as an affiliates belong to the temples or to palaces, at least until to end of
the second millennium BC, beside appeared as a private workshops (Mieroop, 1977, p.179).

No. 4
IM- 49767
Mes. = 8 x 7 x 2 cm.
Obv.
Col.I
1- 1 urudu [ma-na]
[x dug]-urudu
[x-ki]-bîrî
[xx] i3 ma-na
5- si-[x]
10 urudu ma-na
[x] bîrî-mu-šul
[x] ud-urudu
[x dug]-urudu

Col.II
10- 53 urudu ma-na
si-[x]
2 gu4
aš-gan-a
2 dug-urudu
15- si-abzu(ZU.AB)-a
1 gu4
lal3-amar
2 dug-urudu
lu2-nam-na
20- 10 gu4
[……]
[……]

Col.III
2 dug-[urudu]?
1 [gu4]
25- gal-lu2
2 dug-urudu
gi-urudu
2 urudu-[…]
1 dug-uru[du]
30- si-[x]
20 [……]
2 dug-urudu
[………]

Rev.
Col.IV
[x] $gu_4$

35- si-su-ama
3 urudu-dug
gal-zu-kur$_2$-dim$_6$
[si$_4$-šeš .....]

Col.V

gan$_2$ ḍen-[lil$_2$] 1 (šar$_2$) 6 (bur$_3$) 1 (eše$_3$) 4 (iku) apin

40-
5 $gu_4$
17 dug-urudu

Translation:
1- One *Mina* of copper
2- [...] vessel of copper .
3- [...] - kibir
4- [...] *Mina* of oil
5- Si-[…]
6- 10 *Minas* of copper
7- [...] bir-mushul
8- [...] vessel of copper
9- [...] jar of copper
10- 53 *Minas* of copper
11- Si-[…]
12- Two oxen
13- Ashgana
14- Two jars of copper
15- Si-abzua
16- One ox
17- Lalamar
18- Two jars of copper
19- Lunamna
20- 10 oxen
21- [...] 
22- [...] 
23- Two jars of copper
24- One ox
25- Gallu
26- Two jars of copper
27- Giurudu
28- Two (*Minas*) of copper
29- One jar of copper
30- Si-[…]
31- 20 [...] 
32- Two jars of copper
33- [...] 
34- [...] ox
35- Sisuama
36- 3 jars of copper
37- Galzu-kurdim
38- Si-shesh-[
39- The field of Enlil (about) 1 (shar) 6 (bur) 1 (eshe) 4 (iku) of ploughed lands.
40- 5 oxen
41- 17 jars of copper

Commentary:
This text relates with numbers of copper pots and jars, and receives a ploughed lands and oxen to several people, may be to work in this fields which belong to Enlil temple.

1- mana: A Sumerian word refer to the weights (Minas) and its equal to (60 sheqel) about (505 g.) (Labat, MDA, p.157).
2- dug: A Sumerian word refer to (Jar), this synonymous in Akkadian as (karpatu) (Labat, MDA, p.141; CDA, p.149).
3- i3: A Sumerian word refer to (Oil), this synonymous in Akkadian as (samnu) (Borger, AOAT, 2004, p.303).
4- gu4: A Sumerian word refer to (Ox), this synonymous in Akkadian as (alpu) (Labat, MDA, p.137).
5- gan2: A Sumerian word refer to (field, land), this synonymous in Akkadian as (eqlu) (Labat, MDA, p.87).
6- apin: A Sumerian word refer to (plough), this synonymous in Akkadian as (epinnu) (Labat, MDA, p.61).

Conclusion:
1- This texts in this research are came from the Iraqi Museum, and all of them are confiscated texts, and did not come through scientific excavation, therefore, it is difficult to determined its exact location of them, but through its study and analysis, its contents and the language of these texts, and the shapes of their signs, so it can be compared to the texts which published from the same period, make it possible to return these texts to their geographical location, which is located between the two cities (Umma and Lagash), or within the vicinity of the city of Umma.

2- This texts are empty of historical date formula, which known in the rest of historical periods, but it was dated according to the system known to us (mu-iti) formula, this formula used before the Akkadian period, particularly in the Early Dynastic Periods (the Thirds A, B), within the city Umma and Lagash, especially in the reign of the king (Lugalzagisi), and the method of using this numbers was a reference to the years of the reign of that king, so must of the archive texts of (mu-iti) came from the temple of Inanna, in the city of Zabalam, all of them belong to the same king.
3- The texts which published here, have economic nature, it has provided us which important information on the nature of that ancient economy, especially in the Early Dynastic periods.

4- These texts illustrated the importance of minerals (or metal tools) in the lives of the inhabitants of ancient Mesopotamia, and its multiple uses such as the copper industry and converted in the form of pots or tools, as we see in these texts.

Notes:


Sources:

8- Martin Levy, Chemistry and Chemical Technology in Ancient Mesopotamia, translated to Arabic by Mahmood Fayadh Al-Mayahi and Others, (Baghdad:1986).
أدوات معدنية في نصوص مسمارية غير منشورة
من عصر فجر السلالات

الباحثة:
أ.د. منذر علي عبد المالك
جامعة بغداد – كلية الآداب

الملخص:
عرف سكان بلاد الرافدين معادن كثيرة وعرفوا طرق تصنيعها واستعمالها ودخلت في الكثير من أعمالهم وصناعاتهم، حتى في مجال إنتاج الأعمال الفنية والأدوات والآلات الزراعية وأسلحتهم، ومن أهم هذه المعادن الذهب والفضة والنحاس والقصدير التي دخلت في عمل سبائك البرونز وغيرها، وقد اجتهد سكان بلاد الرافدين القدماء في الحصول على خامات المعادن فكانوا يتحملون أعباء السفر والمتاعب في جلب الخامات من أماكن عديدة وكان من بينها دلمون (البحرين) وماكان (عمان) وميلوحا ومصر وبلاد الأناضول.

الكلمات المفتاحية: بلاد الرافدين، النحاس، التجارة، الأواني.
No. 2
IM- 204612

No. 3
IM- 204587
No. 4
IM- 49767

IM. 49767

Obv

Rev