KULRANG CHO‘YANDAN OLINGAN QUYMA MAHSULOTLARIGA KIRITILGAN MODIFIKATORLAR TAHLILI

[a]Jamshidbek Khasanov (PhD), [b]DSc., prof Nodir Turakhodjaev, [a] Saodatxon Tadjibayeva, [a] Nargiza Yusupova
[a]Andijon mashinasozlik institute Andijon, O‘zbekiston
[b]Toshkent davlat Texnika universiteti Toshkent O‘zbekiston

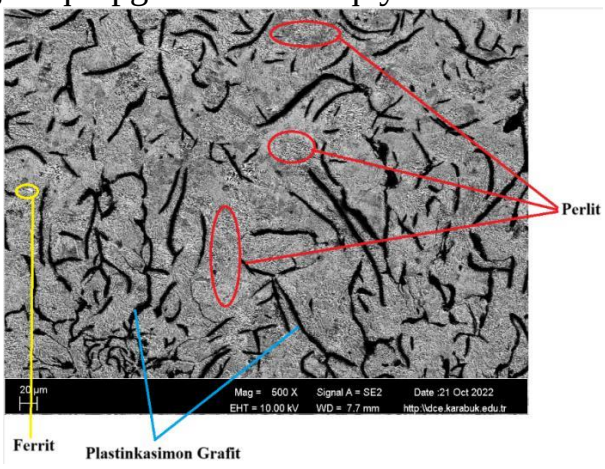
Jahonda bugungi kunda muhim vazifalardan biri, quymakorlik usulida olinayotgan mashinasozlik va ishlab chiqarish sanoatida foydalaniladigan detallarini mustahkamligini oshirish, sifatini, mexanik va ekspluatatsion xossalarini yaxshilash asosida yuqori sifatli, arzon yupqa devorli quyma mahsulotlarini olish muhim ahamiyat kasb etmoqda. Shuningdek, energiya, yoqilg‘i sarfini kamaytirish uchun yuqori mustahkamlikka ega yengil mahsulotlarga ehtiyoj ortib bormoqda. Jahonda yupqa devorli quyma mahsulotlariga bo‘lgan talabni ortishi natijasida ko‘plab texnika va texnologiya rivojlanib, ulardan sifatli, arzon va raqobatbardosh detallar ishlab chiqarish talab etmoqda. Ma’lumot o‘rnida, 2021-yilda kulrang cho‘yan global po‘lat va cho‘yan ishlab chiqarish bozorida eng katta bozor ulushi 37 % ni tashkil etdi [1].

1-jadval

O‘tkazilgan tadqiqot natijalari asosida olingan namunalarning kimyoviy tarkibi

Namuna			Elementlarning massa miqdori						
	C	Mn	Si	Cr	P	S	Ni	Cu	Mo
N – 1	3,30	0,69	2,14	0,11	0,074	0,064	0,06	0,10	0,3
N – 2	3,35	0,69	2,15	0,11	0,074	0,064	0,06	0,20	0,3
N – 3	3,32	0,65	2,20	0,11	0,074	0,064	0,06	0,50	0,3

O‘zmetkombinat AJ korxonasi “Quyuv mexanika sexi” da DSP – 0.5 pechi va Toshkent davlat texnika universiteti “Quymakorlik texnologiyalari” kafedrasi laboratoriyasi pechlarida suyuqlantirib olingan kulrang cho‘yan qotishmasidan 1-jadval asosida qum-gilli qolipga namunalar quyib olindi.



1-rasm. O‘zmetkombinat korxonasida kulrang cho‘yandan quyib olingan ko‘tarma shiber namunasini Axiovert 40 MAT mikroskopida x500 kattalashtirilgan tasviri.

O‘zmetkombinat” AJ korxonasi 2-prokat sexida foydalanib kelayotgan yupqa devorli, murakkab shaklli bo‘lgan ko‘tarma shiber detallarini quyib olishda suyuqlantirilgan qotishmaning oquvchanligi, qattiqligi va yeylishbardoshlik xossalarini oshirish maqsadida modifikatorlar tanlab olindi. Modifikatorlar sifatida GOST 4759 – 91 asosida ferromolibden (FeMo70) pechda va GOST 4515 – 93 asosida MF10 markali mis fosfidni (CuP_2) kovshda va suyuq qotishmaga kiritilib namunalar strukturalar tahlil qilindi.

Elektr – yoy pechida СЧ24–44 qotishmasidan olingan namunalarni kimyoviy tarkibi, mexanik xossalari, mikrostrukturaviy tahlillari O‘zmetkombinat AJ korxonasining markaziy laboratoriyasida “Axiovert 40 MAT”, “SPECTROLAB LAV M12” va “Hardness tester TB 2109” jihozlari, mikrostrukturasini O‘zbekiston – Yaponiya yoshlar innovatsiya markazining laboratoriyasida “Axiovert JSM – IT200” SEM mikroskopi hamda Karabuk universitetining “Iron and steel” instituti laboratoriyasida Carl Zeiss Ultra Plus Field Emission skanerlovchi elektron mikroskopidan foydalangan holda aniqlandi.

Foydalanilgan adabiyotlar

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